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HYGEIA

THE HEALTH MAGAZINE

PUBLISHED BY THE AMERICAN HEALTH ASSOCIATION

FEBRUARY 1931

25 CENTS

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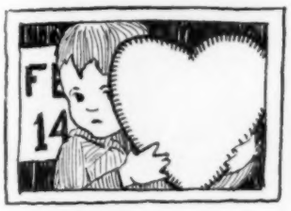

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Contributors to This Issue

E. LEE VINCENT is a child psychologist connected with the famous Merrill-Palmer nursery school at Detroit. Her article is from a more extended treatment of problems in families of different income levels. DR. MILES J. BREUER is a physician and writer known to HYGEIA readers for his previous articles "Tonics" and "Something I Ate."

Our annual loss of a billion dollars through colds and sinus disease is discussed by DR. JAMES J. KING in a paper based on a recent radio talk broadcast under the auspices of the New York Tuberculosis and Health Association. DR. FASSETT EDWARDS, a western physician, discusses glaucoma, a serious eye disease. Another paper by this author awaits early publication.

Before his death DR. GEORGE C. WHIPPLE, professor of sanitary engineering at Harvard University and the Massachusetts Institute of Technology, prepared a pamphlet on pure water for distribution by the bureau of health and public instruction of the American Medical Association. DR. JOHN F. NORTON of the Detroit department of health has brought this material up to date and has furnished some additional facts for use in HYGEIA. Later, plus some additional illustrations and tables, this article will be reprinted in pamphlet form for distribution by the bureau of health and public instruction.

ELOISE LIDDON SOPER, wife of Dr. George Soper, while in Rome last autumn was taken for a tour of the work being done at Ostia and in the Campagna by the Rockefeller Foundation. DR. RACHEL ASH, a frequent contributor, is assistant physician at the cardiac clinic of a large children's hospital in the East. DOROTHY DEMING writes the true story of an experience in New England, depicting the need for rural health service there and in other sections of the country. SUDIE E. PYATT, a newspaper woman, contributes articles to a number of health publications.

PAUL W. DEMPSEY is field superintendent at an experiment station of the Massachusetts Agricultural College. BERNARD BEHREND writes from the school of hygiene and public health of the University of Pennsylvania.

DR. EDWARD LYMAN CORNELL, obstetrician, continues his series of brief articles for the expectant mother. ERROLL HAY COLCOCK wrote the music for Healthyland March when she was a little girl of 7.

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"Ethics of Animal Experimentation"

LEADING editors of the United States were asked recently what would constitute to them the greatest news that could be published during 1931. Practically every one who discussed the question seriously indicated certain advances that were needed in scientific fields. When Mark Sullivan wrote concerning the greatest contribution made to the happiness of mankind, he gave the credit to Louis Pasteur for freeing humanity from the fear of disease.

The work of Louis Pasteur could not have been done without the aid of experimentation on animals. Hardly a single medical discovery of any importance has been announced in the last forty years that did not depend on animal experimentation for final demonstration.

NOTWITHSTANDING these facts, unthinking, sentimentally minded persons conduct lobbies and campaigns against the use of animals in the study of disease and its treatment. Executive secretaries, paid by funds left in trust to oppose animal experimentation, spend their time urging legislation against the use of animals generally, and particularly against the use of the dog. Those who are interested may be assured that animals would never be used unless such use were necessary. The dog is used because it provides conditions of diet, anatomy and physiology closely approximating conditions in man. Without laboratory use of the dog, insulin for diabetes and liver extract for pernicious anemia would not have been established as methods of treatment that annually save many lives. Investigations, under the control of educational and research institutions of the highest rank, are conducted to meet the approval of the medical profession and humanitarians everywhere.

The utility of investigations on animals needs little further argument. The one question that still agitates the minds of many persons is the question of the ethics of animal experimentation. Have human beings the right to experiment on living organisms for their own protection? The question is not so much a scientific as a philosophical one. It must be understood, of course, that many living organisms are the natural enemies of man and that bacteria, the savage beasts of the forest, and many poisonous plants are sacrificed without the slightest compunction because of their danger to mankind. Criminals are destroyed because of their menace to society.

One of the greatest philosophers, Prof. John Dewey, wrote for the *Atlantic Monthly* some years ago, a philosophical consideration of this question. By permission of the *Atlantic Monthly* and with the consent of Professor Dewey his article is reproduced here. HYGEIA was established by the medical profession to educate the public soundly regarding health and disease and to champion the cause of scientific medicine against its enemies. It is an honor and a privilege, therefore, to enlist in this cause so staunch and so capable an ally as Professor Dewey, whose consideration of the question follows:

By John Dewey

DIFFERENT moralists give different reasons as to why cruelty to animals is wrong. But about the fact of its immorality there is no question, and hence no need for argument. Whether the reason is some inherent right of the animal, or a reflex bad effect upon the character of the human being, or whatever it be, cruelty, the wanton and needless infliction of suffering upon any sentient creature, is unquestionably wrong. There is, however, no ethical justification for the assumption that experimentation upon animals, even when it involves some pain or entails, as is more common, death without pain—since the animals are still under the influence of anesthetics—is a species of cruelty. Nor is there moral justification for the statement that the relations of scientific men to animals should be under any laws or restrictions save those general ones which regulate the behavior of all men so as to protect animals from cruelty. Neither of these propositions conveys, however, the full truth, for they are couched negatively, while the truth is positive. Stated positively, the moral principles relating to animal experimentation would read as follows:

1. Scientific men are under definite obligation to experiment upon animals so far as that is the alternative to random and possibly harmful experimentation upon human beings, and so far as such experimentation is a means of saving

human life and of increasing human vigor and efficiency.

2. The community at large is under definite obligations to see to it that physicians and scientific men are not needlessly hampered in carrying on the inquiries necessary for an adequate performance of their important social office of sustaining human life and vigor.

Let us consider these propositions separately.

I

WHEN we speak of the moral right of competent persons to experiment upon animals in order to get the knowledge and the resources necessary to eliminate useless and harmful experimentation upon human beings and to take better care of their health, we understate the case. Such experimentation is more than a right; it is a duty. When men have devoted themselves to the promotion of human health and vigor, they are under an obligation, no less binding because tacit, to avail themselves of all the resources which will secure a more effective performance of their high office. This office is other than the mere lessening of the physical pain endured by human beings when ill. Important as this is, there is something much worse than physical pain, just as there are better things than physical pleasures.

The person who is ill not merely suffers pain but is rendered unfit to meet his ordinary social responsibilities; he is incapacitated for service to those about him, some of whom may be directly dependent upon him. Moreover, his removal from the sphere of social relations does not merely leave a blank where he was; it involves a wrench upon the sympathies and affections of others. The moral suffering thus caused is something that has no counterpart anywhere in the life of animals, whose joys and sufferings remain upon a physical plane. To cure disease, to prevent needless death, is thus a totally different matter, occupying an infinitely higher plane, from the mere palliation of physical pain. To cure disease and prevent death is to promote the fundamental conditions of social welfare; is to secure the conditions requisite to an effective performance of all social activities; is to preserve human affections from the frightful waste and drain occasioned by the needless suffering and death of others with whom one is bound up.

These things are so obvious that it almost seems necessary to apologize for mentioning them. But any one who reads the literature or who hears the speeches directed against animal experimentation will recognize that the ethical basis of the agitation against it is due to ignoring these considerations. It is constantly assumed that the object of animal experimentation is a selfish willingness to inflict physical pain upon others simply to save physical pain to ourselves.

On the moral side, the whole question is argued as if it were merely a balancing of physical pain to human beings and to animals over against each other. If it were such a question, the majority would probably decide that the claims of human suffering take precedence over that of animals; but a minority would doubtless voice the opposite view, and the issue would be so far inconclusive. But this is not the question. Instead of being the question of animal physical pain against human physical pain, it is the question of a certain amount of physical suffering to animals—reduced in extent to a minimum by the precautions of anesthesia, asepsis, and skill—against the bonds and relations which hold people together in society, against the conditions of social vigor and vitality, against the deepest of shocks and interferences to human love and service.

No one who has faced this issue can be in doubt as to where the moral right and wrong lie. To prefer the claims of the physical sensations of animals to the prevention of death and the cure of disease—probably the greatest sources of poverty, distress and inefficiency, and certainly the greatest sources of moral suffering—does not rise even to the level of sentimentalism.

It is accordingly the duty of scientific men to use animal experimentation as an instrument in the promotion of social well-being; and it is the duty of the general public to protect these men from attacks that hamper their work. It is the duty of the general public to sustain them in their endeavors. For physicians and scientific men, though having their individual failings and fallibilities like the rest of us, are in this matter acting as ministers and ambassadors of the public good.

II

THIS brings us to the second point: What is the duty of the community regarding legislation that imposes special restrictions upon the persons engaged in scientific experimentation with animals? That it is the duty of the state to pass general laws against cruelty to animals is a fact recognized by well-nigh all civilized states. But opponents of animal experimentation are not content with such general legislation; they demand what is in effect, if not legally, class legislation, putting scientific men under peculiar surveillance and limitation. Men

in slaughter-houses, truck drivers, hostlers, cattle and horse owners, farmers and stable keepers, may be taken care of by general legislation; but educated men, devoted to scientific research, and physicians, devoted to the relief of suffering humanity, need some special supervision and regulation!

Unprejudiced people naturally inquire after the right and the wrong of this matter. Hearing accusations of wantonly cruel deeds—actuated by no higher motive than passing curiosity—brought against workers in laboratories and teachers in classrooms, at first they may be moved to believe that additional special legislation is required. Further thought leads, however, to a further question: If these charges of cruelty are justified, why are not those guilty of it brought up for trial in accordance with the laws already provided against cruelty to animals? Consideration of the fact that the remedies and punishments already provided are not resorted to by those so vehement in their charges against scientific workers leads the unprejudiced inquirer to a further conclusion.

Agitation for new laws is not so much intended to prevent specific instances of cruelty to animals as to subject scientific inquiry to hampering restrictions. The moral issue changes to this question: What ought to be the moral attitude of the public toward the proposal to put scientific inquiry under restrictive conditions? No one who really asks himself this question—without mixing it up with the other question of cruelty to animals that is taken care of by already existing laws—can, I imagine, be in doubt as to its answer. Nevertheless, one consideration should be emphasized. *Scientific inquiry has been the chief instrumentality in bringing man from barbarism to civilization, from darkness to light, while it has incurred, at every step, determined opposition from the powers of ignorance, misunderstanding and jealousy.*

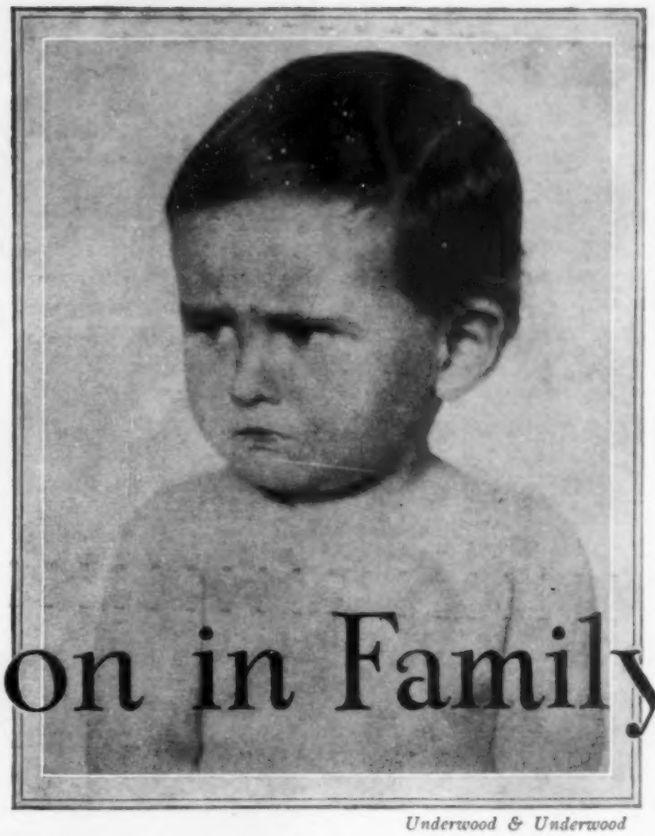
It is not so long ago, as years are reckoned, that a scientist in a physical or chemical laboratory was popularly regarded as a magician engaged in unlawful pursuits or as in impious converse with evil spirits, about whom all sorts of detrimental stories were circulated and believed. Those days have gone; generally speaking, the value of free scientific inquiry as an intrumentality of social progress and enlightenment is acknowledged. At the same time, it is possible, by making irrelevant emotional appeals and obscuring the real issues, to galvanize into life something of the old spirit of misunderstanding, envy and dread of science. The point at issue in the subjection of animal experimenters to special supervision and legislation is thus deeper than at first sight appears. In principle it involves the revival of that animosity to discovery and to the application to life of the fruits of discovery which, upon the whole, has been the chief foe of human progress. It behooves every thoughtful individual to be constantly on the alert against every revival of this spirit, in whatever guise it presents itself.

III

IT WOULD be agreeable to close with these positive statements of general principles; but it is hardly possible to avoid saying a few words regarding the ethics of the way in which the campaign against animal experimentation is often waged. Exaggerated statements, repetitions of allegations of cruelty which have never been proved or even examined, use of sporadic cases of cruelty to animals in Europe a generation or two ago as if they were typical of the practice in the United States today, refusal to accept the testimony of reputable scientific men regarding either their own procedure or the benefits that have accrued to humanity and to the brute kingdom itself from animal experimentation, uncharitable judgment varying from vague insinuation to downright aspersion—these things certainly have an ethical aspect which must be taken into account by unbiased men and women desirous that right and justice shall prevail.

It is also a fair requirement that some kind of perspective and proportion shall be maintained in moral judgments. Doubtless more suffering is inflicted upon animals in a single day in a single abattoir in some one city of our country than in the year, or years, in all the scientific and medical laboratories of all the United States. Do they come into court with clean hands who complacently, without protest and without effort to remedy or to alleviate existing evils, daily satisfy their own physical appetites at the cost of the death of animals after suffering, in order then to turn around and cry out against a relatively insignificant number of deaths occurring, after skilled precautions against suffering, in the cause of advancement of knowledge for the sake of the relief of humanity? Surely, until it is finally decided that the taking of animal life for human food is wrong, there is something morally unsound in any agitation which questions the right to take animal life in the interests of the life and health of men, women and children, especially when infinitely more precautions are used to avoid animal suffering in the latter case than in the former.

E. LEE VINCENT GIVES HER VIEWS ON



THE EMOTIONAL SETTING WITHIN THE HOME

Emotion in Family Life

Underwood & Underwood

The modern child needs casual letting alone tempered with occasional expressions of love.

THE factors of inheritance, of early experience, of physical and community setting are of consequence to the person who tries to guide children. But they are many times impossible to control. The one set of circumstances which is of extreme importance and which offers a point of attack in any home regardless of its socio-economic status is the emotional setting within the home. Granted that it cannot always be controlled, it offers the same types of problems in all homes.

An Only Child

Not all homemakers, social workers, educators or physicians mean the same thing when they refer to the emotional setting within the home. Since this article is concerned with factors that influence the development of children, for discussion let us decide upon two aspects of this emotional setting: the child's place in the family constellation, and the personal interrelationships between various members of the family group so far as they concern the child.

Dr. Alfred Adler has done much to make us realize the importance of the child's place in the family. He teaches that oldest children, middle children, youngest children or only children suffer specific advantages or disadvantages peculiar to the fact of being oldest, middle, youngest or only children. There seems to be a current opinion that only children have no chance whatever or at best a narrow chance to develop desirably. Recent studies on the relation of place in the family to adjustment or maladjustment have produced somewhat conflicting results. It seems that only children do not necessarily turn out bad but rather that they have accounted for a goodly proportion of the world's outstanding geniuses.

Only children, however, are subject to characteristic dangers in the path of personality development. They need not necessarily be spoiled, although many times they are. Certain wise parents of only children arrange their time and distribute their attention so that the child has merely a share in it; if they do not, the only child may easily learn to monopolize the time and attention of all adults with whom he comes in contact. The neurotic and psychopathic personalities that may develop as the result of insistent and excessive bids for attention are familiar to every practitioner. The only child need not develop abnormally if his parents appreciate the situation and bend every effort toward dealing with it intelligently.

Oldest and Youngest Children

The oldest child, having been an only child for at least a year but usually for a longer period, faces the possibility of personality stress when he finds himself replaced or at least partly displaced by another child. A sane preparation for the new baby and a sane division of attention after the arrival of the added child will do much to avoid difficulty. Oldest children need not have but often do have an excess of responsi-

bility for family welfare thrust on them at an early age. Some responsibility for younger children is natural and desirable, but complete responsibility for the care of younger children often robs the oldest child of spontaneous play and freedom for his own growth, thus developing a too sober or a too domineering and executive type of personality. The complete and undisputed authority that children need to develop in order to keep slightly younger children in control often fixes a domineering and uncompromising aspect of the personality.

Youngest children are likely to suffer the disadvantages of only children except that they have the added disadvantage of possible indulgence by older brothers and sisters as well as by parents, although they have the possible advantage of adjustment to other children and of the need of sharing parental time and attention. Their greatest disadvantage to development is inherent in the fact that one of their immediate assets is being the baby of the family. They thus suffer the temptation to retain babyish traits and mannerisms at the expense of the impulse to grow up.

Middle Children

Middle children, being neither oldest nor youngest, are likely to be pushed into the background of parental attention and to suffer the inferiority feeling of the person who does not expect to attract attention or to excite comment. Occasionally, however, middle children profit from the peculiar advantage of freedom from excessive attention and find themselves able to develop their own individualities without interference. They not infrequently turn out to be the strongest member of a family.

An only boy in a family of girls or an only girl in a family of boys may suffer either because of too much attention as a result of his unique position in the family or because of too little, being out of everything. An only boy or girl, surrounded by members of the opposite sex, is likely to exaggerate the importance of mere sex difference and may come to overevaluate or to underevaluate the qualities of his own sex. Thus he may exaggerate the boisterous and domineering qualities of maleness, if a boy, or the clinging and dependent qualities of femaleness, if a girl. On the other hand, the child may depreciate the qualities of his own sex and may tend to adopt the attitudes and qualities characteristic of the opposite sex, becoming an effeminate boy or a masculine type of girl. Each child should learn that certain personality traits are desirable regardless of sex, and that sex differences represent only one of several important elements in adjustment to life.

Contrast plays a leading rôle also in the lives of children who prove to be the only attractive child in a family of unattractive children, the only average child in a family of brilliant children, the only unattractive child in a family of attractive children, the only dull child in a family of average children, and so on in any number of combinations that emphasize the contrast of one child with others in the same family. The exaggerated sense of inferiority or of superiority that may develop in such a family situation may be an extremely important aspect of the behavior of such a child. Each child in any family group must be given a fair point of view about his own capacities and must be made to feel that he has some, although not too much, importance and responsibility in family membership.

The child is subject to the conditions peculiar to his position in the family constellation. Guidance expert or parent may have occasion to recognize these conditions and to deal with them consciously as factors that influence child development and should be alert to their importance in the life of every child. The other set of conditions that may mold child development regardless of the socio-economic status of the family is the personal relationships that maintain within the home. These relationships are often classified as parent-parent relationships (or spousal relationships), parent-child relationships, and relationships existing between the child and other members of the household—brothers and sisters, grandparents and so on.

Harmony between parents is essential to the best development of their children. Quarreling or disharmony, particularly of the type that reaches the sensibilities of children, seems to create unhappiness and breed tension with the result that the children fail to thrive as do children in homes in which harmony surrounds them. Delinquent children, composing as some studies seem to show a conspicuously high percentage of children from broken homes, afford a current example of this point. The point would doubtless find itself established on a sounder basis, however, if more were known about the development of children in homes in which the parents are still living together although unhappily mated or of children in homes in which harmony is known to exist.

Parent-Child Relationships

The practitioner in child guidance occasionally sees children from homes in which the parents are so perfectly mated that honeymoon romance lasts throughout the years with the result that the children are more or less effectively shut out and develop the problems characteristic of the lack of sufficient parental love and attention. On the other hand, every practitioner is familiar with the problems of children suffering from lack of attention because parents are too absorbed in conflict or of children suffering from the too stifling parental love that results when one or both parents use the child as an outlet for frustrated spousal love.

Problems of authority and obedience, too, become acute when the child senses disagreement between parents as to his discipline, his food, his clothing and his education. Best development seems to result when the spousal relationship is harmonious but not so absorbing that it leaves too little love and attention for the children.

There is, moreover, a distinct advantage in having both parents share in the responsibility for the care of children, both in the physical care of the young child and in the discipline of and planning for an older child.

The child's relationship to members of the household other than his parents is usually worth at least brief consideration in dealing with the problems of child development. Not infrequently difficulty in development will be found in fear of a tyrannical grandfather, in tyranny over a too indulgent grandmother, in jealousy of another child, in the strain of teasing by another child, or in the attempt to keep pace with a superior or an older brother or sister. Both physical and psychologic difficulties often result from tensions inherent in the child's relationship with such members of his family.

H. Armstrong Roberts

Harmony between parents is essential to the best development of their children. Quarreling creates unhappiness.

Perhaps the most important emotional factor in the development of children, certainly most important in the development of young children, is the parent-child relationship. A number of phases of this relationship are relevant to the question at hand, but two of them are more or less focal to the others. How much and what kind of discipline do parents give their children? How much and what kind of affection do children receive from their parents? These are questions of consummate importance to the child's development.

Problems of discipline or obedience cover a wide group of other problems. If a child has finicky eating habits, has temper tantrums, is negative, wets the bed, destroys property, lies or steals, there often may be something wrong with the discipline aspect of the parent-child relationship. Sometimes the difficulty lies in the fact that parents believe in instant and unquestioning obedience. This is usually the father's program, built on his experience of the world outside the home as he believes it to be —a world in which discipline is a constant and severe taskmaster. Such parents usually operate on the thesis that instant and unquestioning obedience is the shortest cut to self-discipline and a lesson to be learned early in life. Their voices are often harsh when addressing children and not infrequently bear a note that challenges any self-respecting person to dare disobedience.

Some children do dare disobedience and get a lot of excitement from the ensuing parental reaction. The conflict between parent and child often becomes so very heated that it occupies a major share of the time they spend together and may provide the child with so much interest and excitement that he need seek no other source of entertainment. A child who concentrates an appreciable part of his time on conflict with his parent usually wins most of the issues because he has more time to devote to the situation than has his parent, who must share his time and attention with other problems of living.

Children who come into too frequent conflict with the authority of childhood as represented in the parent are likely to develop a permanently negativistic attitude toward all authority and to encounter endless difficulty in adult life because of their inability to cooperate with the authority of state or of social convention.

Not all children, however, react negatively to an over-repressive authority. Some of them, instead of developing temper tantrums or other negativistic habits, become completely submissive and docile. Such children lose their initiative, because they find it useless or a source of

trouble and develop into the automaton type of person who does whatever he is told to do and who never does anything without being told to do it. Such persons make successful "parlor trick" children, who are often the envy of parents whose own children are possessed of greater initiative and are hence more trouble to manage.

The difficulty with this reaction to authority is that docility and lack of initiative often fix themselves as life habits and produce the tool of politicians or of criminal gangs or, at best, the harmless failure in life. Guidance experts agree that neither the negativistic nor the submissive reaction to instant and unquestioning obedience is healthy for the personality.

When Discipline Is Lacking

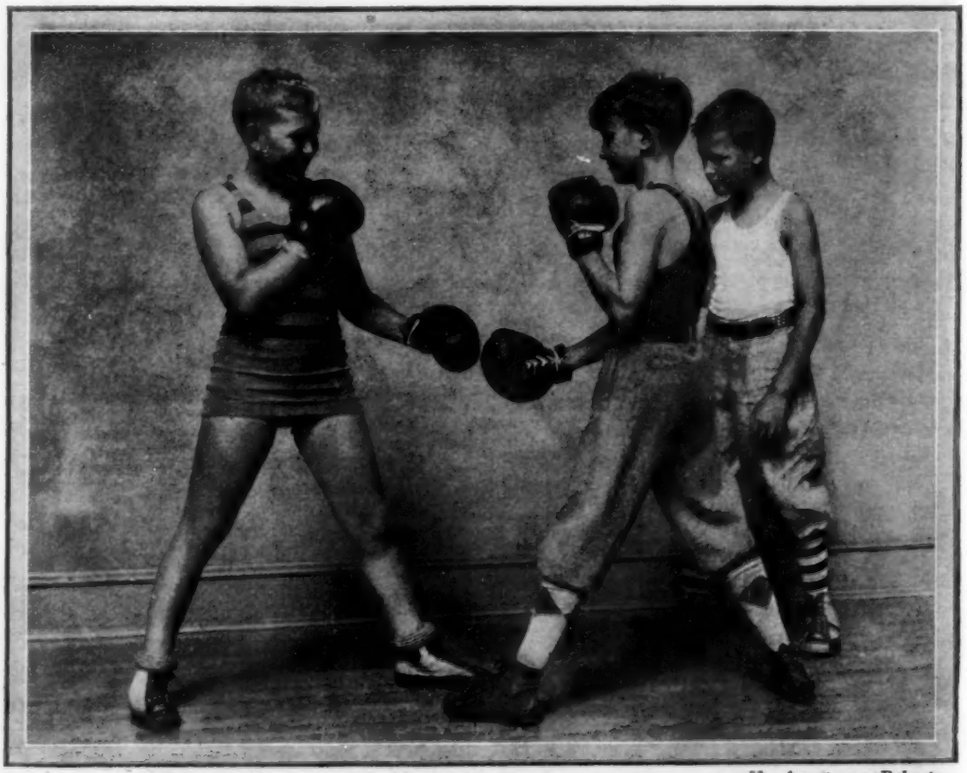
Some experts, realizing these dangers to the personality, have swung to the other extreme in their advice to parents and have recommended that children be left completely free to express themselves and to develop individuality. Many parents, without outside guidance, have chosen this program of complete freedom as a reaction to the severe discipline of their own childhood. They indulge every childish desire that their purses permit and make every effort to allow complete expression of all childish impulses. This usually amounts to a program entirely lacking in so-called discipline and results in the well known spoiled child type of personality—one that brooks no interference or guidance, that is impulsive, inconsiderate and thoroughly selfish. Such personalities, though superficially charming to some people in their impulsiveness, are lacking in the strength that self-control and consideration for others lend to human character. Children brought up under such a self-expression program are obviously not freed as their parents so fondly hope but rather are enslaved by their own whims. Common sense points to the conclusion that such slavery is an unfortunate outcome of childhood experience with a flabby or an overindulgent parental authority. Every home from the poorest to the wealthiest can and should give to its children a constructive experience with parental authority which neither robs the child of initiative nor enslaves him to his impulses. Every child is entitled to a consistent, thoughtful, kindly but firm guidance from his parents.

The Right Amount of Affection

Just as every home presents a discipline aspect of the parent-child relationship, so does every home offer problems in the adjustment of affection between parent and child. Common sense dictates the answer here as it does in discipline, and the answer is also: enough but not too much.

Some parents shower evidences of love upon their children, tending and caressing them excessively, appreciating and praising them constantly. If the parental desire is to bind the child to the parents so that he is helpless and unhappy when away from them, this result is usually achieved. Children brought up in a hothouse atmosphere of physical caresses and of constant praise of everything they do and say are usually thoroughly overwhelmed and bewildered when compelled to face a less understanding and appreciative world. The chill blast of the world's indifference drives them back home (which often gratifies the parent exceedingly) or, if such retreat is not possible, precipitates a personality breakdown of the most tragic sort.

Some parents, on the other hand, having read certain types of psychiatric literature on the subject or having followed the dictates of some of the so-called newer psychologists, lean to the



H. Armstrong Roberts

The child's relation to other children in the family and outside has a direct influence on character development.

other extreme in the matter of parent-child affection. They consider kissing the baby a short cut to stimulation of excessive erotic passion or to a mother or father fixation with the traditional neurotic accompaniment. Such parents have been led to think that any appreciation of the child whatever will inevitably result in a warped personality. In their conscientious attempt to avoid such a possibility they assume an attitude of bored indifference toward their children, never expressing appreciation or affection at all or, if at all, so subtly as to transcend the comprehension of the children, who by the very nature of childhood are not in a position to understand abstractions of any kind.

Children who receive no concrete evidences of love or appreciation, who are never patted or kissed or held in a lap, who are never told specifically that they have done well or have earned a special privilege are usually left with the impression that no one loves them and that they never do anything right. Love-starved or underpraised children are more than likely to place an excessively high value on love and praise, and hence to develop too keen an appetite for the very thing their overconscientious parents are trying to avoid.

One teacher who has had a wide experience with children of all ages and of all social classes and who appreciates the danger of extremes stated the case for parent-child affection very well when she said, "Modern children need a large dose of casual letting alone tempered with the expressions of love and appreciation that any normal parent would give his child if he had never heard the word neuroticism."

The science of child development assumes today an important place among the social sciences. The future of the world depends largely on the strength or weakness of the population of the future, and it is now generally recognized that the training and care of today's childhood vastly influences the character of tomorrow's adulthood.

That families having different income levels present different problems to child development is obvious. That family life in general, regardless of socio-economic status, presents a wide variety of common problems is perhaps not so evident. Any one who makes contact with families in the rôle of guidance, be he social worker, minister, educator, psychologist or physician, may find help from a thoughtful analysis of the problems of family life, recognizing not only the variations presented by the mere fact of variations of income level but also the general laws and principles operative in all families regardless of income level. Present-day work in family relations and in child development has much to contribute to this analysis if we care to take advantage of what it offers. On the other hand, the practical worker in the field of family guidance has much to offer the developing science of family relations and child guidance. Cooperation between practical worker and scientific investigator should do much to increase human happiness.

H. Armstrong Roberts

Lack of play space in cities is a serious thing. Children need freedom for play.

To summarize, the development of children is dependent on certain factors, some of which are correlated with and contingent on socio-economic status, but many of which can be controlled in any home regardless of its status. Outstanding among the factors which are almost entirely independent of socio-economic status is one which is most important to the development of children, viz., the emotional setting within the home. Harmony or disharmony between the parents, their attitude toward the responsibility of parenthood, their general philosophy of life are all directly reflected in the development of their children. Still more direct in effect upon children are the subtle aspects of a parent-child-relationship: the amount and kind of discipline and the amount and kind of love parents give their children. The child's relation to other children in the family, the kind of companionship he experiences outside of the family, the ideals of school, of church, and of community all exert a direct influence upon his development.

The social worker, the school teacher, the minister, or any one else who makes contacts with families in the rôle of adviser can greatly extend his service to family life and childhood if he recognizes and guides intelligently the factors which can be made to contribute happiness and growth in any family, no matter what its income level.

Today a visit to the doctor may cost $5 or $25 and no prescription is given.

Value Received for

IF YOUR DOCTOR BILL IS LARGE, HERE ARE SOME REASONS FOR IT

MEDICAL services cost more now than they did in the good old days. Compared with what it was, say, in the "gay nineties," a doctor's bill is so much bigger today that many people are seriously concerned about it as a public question. In every way it costs more to be sick, what with hospitals and nurses, expensive serums, braces, treatment lamps and such things. But, in this discussion, for the sake of simplicity, let us leave hospitals and nurses and accessory functions out of the question and concern ourselves only with the fee that is paid to the doctor himself.

In the gay nineties one went to a doctor and paid him a dollar for a prescription. Today, one gets in a doctor's office, and it may cost $5 or $25; and one may not even get the prescription. Other fees to doctors have increased proportionately.

The change in medical fees is, of course, merely one phase of the vast sociological and economic transformations that have occurred since these selfsame nineties. One sometimes hears people discuss the matter as though they thought there was a great conspiracy among medical men to raise prices and rob the people. Perhaps there really are some persons who think that medical fees have been raised in the same manner that the price of a commodity is raised when a monopoly has a corner on it. They think that there is a great national organization or trust of doctors who have marked the public in sections to be gobbled up among themselves.

Never was there a more innocent error. Medical fees today are governed by the freest kind of a flux of supply and demand. As a class, medical men are further from having accomplished unity among themselves for the purposes of regulating remuneration for services than is any other class in the community. No doctor charges as much as he thinks he ought to get; he charges as little as he possibly can and still pay expenses and make a living, knowing that unless he assumes that attitude there will be plenty of others who are capable of doing his work and who will be glad to do it at a reasonable fee.

The principal thing that has driven medical fees to their present height is the cost of delivering medical services. The man who gives a salesman $1,000 for an automobile realizes full well that the salesman does not keep the whole thousand dollars for himself. He never accuses the salesman of making $1,000 by the transaction. Yet the same man who gives a surgeon $100 or $200 for an operation, or an internist $25 for a diagnosis, or a family doctor $5 for a house visit has the impression that the medical man has made that amount of money and put it all in his pocket. From the outside it looks like clear profit.

Doctors Have Overhead Expense

This man has not stopped to think that the delivery of medical services carries with it a definite and considerable overhead expense quite as real as that of plumbing, laundering clothes or repairing automobiles. A physician who keeps up to date in professional knowledge and equipment is compelled to spend from 40 to 60 cents of every dollar that he receives to defray the actual expense of delivering competent service to his patients. This heavy overhead expense is something that did not exist in the nineties.

Fifty years ago, the average physician's overhead expense consisted in the upkeep of a team

Doctors' Bills

By MILES J. BREUER

In the gay nineties one went to a doctor and paid him $1 for a prescription.

of horses and a buggy, and the purchase of a few books, journals and instruments, hardly amounting to $100 a year. The cost of his education, which ought to be counted, was a small matter; it took two or three years and expenses were low.

Today, a medical education takes from seven years up; the books, instruments and laboratory fees that go with it are an enormous item of expense. It has been variously estimated that the total cost of a medical education at the present time is from $10,000 to $30,000. Anyway, one could buy a good farm for what it costs to study medicine. People considerately admit that a doctor is put to some expense in keeping up an automobile. That is really an incidental factor. Nowadays, a doctor's office is as expensive to equip as a factory or a machine shop. Here are some of the items of the original investment:

Clinical laboratory	$ 200 to $2,000
Basal metabolism apparatus	200 to 1,000
X-ray	1,000 to 5,000
Electrocardiograph	2,000

These are in addition to such well known things as sterilizers and examining tables and special medical or surgical furniture, the cost of which easily runs into the hundreds. Furthermore, in order to carry out modern scientific procedures on his patients, the doctor must employ skilled assistants at salaries high enough to insure competent work. Whether or not your doctor possesses these resources of modern medical practice in his own office or needs to have them utilized on you by some one else, if you wish to receive competent medical service based on modern medical knowledge, the overhead of these items enters into your bill.

A progressive physician spends considerably more than $100 a year for books and journals alone, and a good many hundreds of dollars a year attending professional meetings and postgraduate courses, so that he may keep up his standard of ability.

Taken all together, the overhead expense that goes into the service that a patient gets, even though it is merely a fifteen-minute consultation at the office, is astonishing. A patient may spend only ten minutes in the office, and yet the service rendered may involve enough overhead to call for a fee of $10 or $25. An x-ray picture is an excellent example. As much as $25 worth of x-ray work may be done in only a few minutes.

A second reason for the higher cost of modern medical service is that today the medical profession has more to give to the public, and this greater value received must be paid for. As the great mass of physicians are not financially endowed and are not possessed of independent incomes, they are compelled to make their practice pay expenses. Under our present social organization, there is no way of getting to the patient the benefit of modern medical science except to require the patient to pay the costs.

Fewer Deaths Today

Fifty years ago, an attack of appendicitis did not cost the family much, merely a visit or two from the doctor. The funeral expenses are usually overlooked when making comparisons between the medical fees of the two periods, but they ought to be included in the estimates. Today, an attack of appendicitis is expensive. But the patient gets well and can earn the money to pay off the bill in a few months at the most. To train a medical man to be able to recognize the danger and to train a surgeon to be able to

save the patient's life are matters of considerable expense. Just who is to meet this expense if it is not the patient?

Fifty years ago, out of every four patients with diphtheria, three died. Today, deaths from diphtheria are among the rarer things. In those days the doctor did not do much except sit by the bedside in a worried mental condition. Today, there are certain definite things for the doctor to do; the march of medical research has provided him with means of knowing how to recognize and combat the disease, and the enterprise of manufacturers has given him the material tools with which to combat it. He has been trained and equipped and the fight with diphtheria is a short one with victory for the patient. But the result is a big bill.

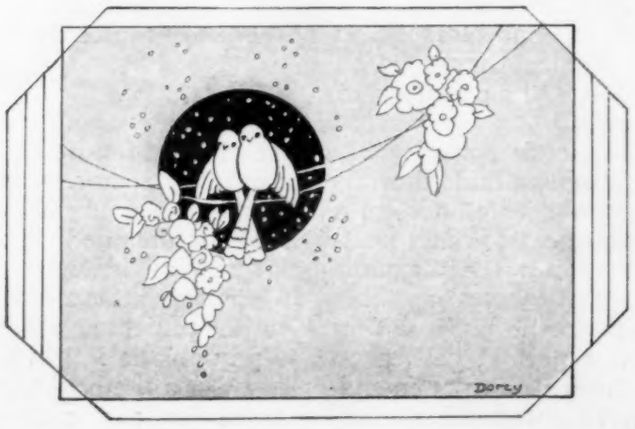
Orthopedic specialists' bills are usually considered particularly high. Why? When I was a boy, I remember knowing a considerable number of elderly one-legged and one-armed men. Today, such cripples are rarely seen, in spite of the immensely increased mechanical hazards to human limbs. Orthopedists do not amputate limbs. They save arms and legs and make them useful. They are really delivering goods for their high prices.

It would not be possible within the confines of a short essay to enumerate and extol the feats of modern medical science. No reader needs more than the merest reminder in order to realize and appreciate that the accomplishments of modern medical science are little short of miracles in the saving of lives, the relief of suffering, the salvage of human efficiency and the prolongation of the years of living. What I do wish to bring out is the fact that all these advances have to be paid for, just as our skyscrapers and good roads, our automobiles and parks, our good clothes and vacation trips have to be paid for. The money for them does not remain in the doctor's personal pocket. The doctor is merely a sort of retailer of these benefits; the dollar that he gets he must distribute among a great many agencies that are carrying forward the front line of medical progress to save life and relieve pain—among educators, research workers, manufacturers, distributors and all the complex social fabric that makes it possible for all these people to work together.

If there is any one who is sincere in his complaint about the exorbitance of medical expenses, let him imagine for a moment how it would be if all modern medical service were suddenly wiped out. Suppose a world with no surgery, no antitoxin and no x-rays. Imagine a medieval state of affairs in which hardly one baby out of every two born lived to reach the age of 1 year; in which city streets abounded with cripples, blind, deformed, cancerous and ulcerated people; in which childbirth was more dangerous for the mother than a pitched battle for the soldiers involved; in which terrific epidemics swept through the cities and annihilated a fourth of the inhabitants; in which in every dirty corner, in every dish of food, in every uncared for garment, on every fly and mosquito, there lurked in ambush unknown germs of disease that struck at people without warning and took an enormous toll of life; in which life and health were so uncertain that people lived, on the one hand, in the joys of the present moment and had no confidence in starting business enterprises for several years ahead, and, on the other hand, in the faith of a future life that would compensate them for all the uncertainties and sufferings of this world.

Is any price at all too high to pay for the clean, strong, healthy bodies that we are seeing about us today and for the clear-headed persons who look cheerfully forward to tasks ten years ahead in all reasonable confidence that they will still be alive and well able to perform them?

These benefits are being delivered to the public by the medical profession. Their cost is high. But it is a cost that is reaching the consumer on a competitive basis. The law of supply and demand is making it the lowest possible price at which these benefits may be produced under our present state of social organization.



The Billion Dollar Loss *from* Colds

By James J. King

THE common cold, with its complications and sequelae, costs this country more than a billion dollars a year. According to a survey made by the United States Public Health Service, there is on account of colds an average loss of work of about two and one-fifth days for each worker. If we multiply this figure by the number employed in gainful occupation, it gives a total loss of 90,000,000 work days a year. We, therefore, see that the loss to industry alone is about $500,000,000. Now consider the additional loss as a result of inefficiency for a longer period and the cost of medical care and medicines. This makes the money cost to industry easily more than one billion dollars a year. This is the cost of colds every year in dollars.

When the stock market suffers a billion dollar loss the public press is filled with news of the depression. Yet, the infections commonly called colds cost this country a billion dollars a year—year after year. This neglected disease collects its toll continuously.

Colds are contagious and are passed from one member of a family to another until the whole family is affected.

If you add to this cost in money the suffering from colds and their complications, you will get a true picture of this expensive malady. It is the most prevalent of all diseases. Sixty per cent, or three fifths of the population, have at least two colds a year. Much of this loss is preventable.

One of my patients recently asked what changes I would recommend in the re-creation of the nose and upper respiratory tract for the improvement of the human race. After some consideration, I replied that when the nose and upper respiratory tract are functioning normally, their mechanism cannot be improved upon. We may all have reverence and respect for the human machine. It works better and stands more abuse and punishment than any machine ever invented by man.

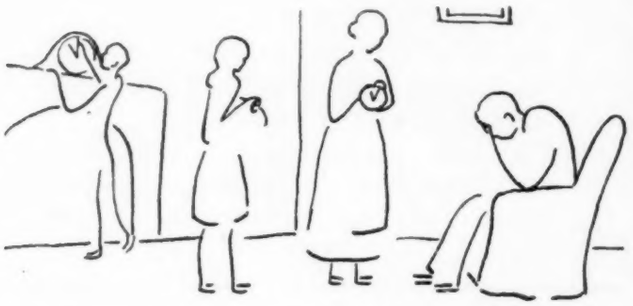
A brief answer to the question of prevention of colds is "Keep the organs working normally." We must give our bodies reasonable care and must enjoy to the fullest extent the natural remedies at our disposal, such as fresh air, sunshine, exercise, proper food, sufficient sleep, freedom from unnecessary worries, and sufficient and satisfactory elimination of accumulated poisons.

The nose plays a major rôle in such a program. The functions of this wonderful organ are respiratory, olfactory and thermostatic. One should breathe through the nose at all times, and if this is done nearly all coughs will be eliminated. The nose is so constructed that when the air is taken into the nose, it is filtered by a waving action of the hairlike epithelial lining of the nose. This action in a normal nose arrests all the particles of dirt, dust and bacteria that go through it. The turbinate bodies of the nose have an abundant supply of blood circulating through them, so that when the air is drawn into the nose it is warmed from the atmospheric temperature, whatever it may be,

HOW TO AVOID COLDS

1. *Keep all the organs working normally.*
2. *Get plenty of sunshine and fresh air.*
3. *Eat sufficient and proper food.*
4. *Dress comfortably but do not overdress.*
5. *Keep clean, especially the hands.*
6. *Eliminate the body poisons through bowels, kidneys and lungs.*
7. *Get rid of chronic mouth infections.*
8. *Vaccines may be helpful in immunizing against colds in some cases.*
9. *For best results, consult your physician frequently in the early stages of colds.*

whether 76 F. or —20 F. to the normal body temperature of 98.4 F. It reaches the lungs warmed to body temperature and causes no irritation as colder air would do. Thus, when air is taken into the nose and carried to the lungs, it is filtered, warmed, moistened, and rendered free from harmful substances, such as dust and bacteria. When the air is breathed through the mouth and goes directly to the lungs, it is irritating to the pharynx, or back of the throat, to the larynx and to the lungs.



You can set your watch by it, so regularly does the pain come and leave in frontal sinus disease.

It is, therefore, of paramount importance to maintain breathing through the nose. How may we maintain this normal function of the nose? The answer is by observing general hygienic rules for health. How can we prevent our noses from getting so stuffed up that we cannot breathe through them and from getting sneezing and coughing fits that frequently almost drive us to distraction?

The cause of colds has been the subject of frequent discussions by medical men but as yet no definite, specific bacteria have been isolated as being the specific cause of colds. In colds, many germs, such as streptococci, pneumococci and staphylococci, are found in the nose and throat but they are constantly found in healthy persons. When the body is filled with the accumulated poisons that are due to lack of elimination by the skin, kidneys, lungs and intestines, and to fatigue, a cold is likely to ensue. Therefore, fatigue, lack of sleep, lack of proper elimination and lack of sunshine and fresh air are the greatest predisposing factors in the causation of colds.

It is believed that the specific cause is a filtrable virus so small that it has so far not been discovered by the strongest microscope. This virus is always found in the nose of every person with a cold.

Colds are contagious and are passed from one member of a family to another until the whole family is affected. The complications of colds are many and serious. They frequently develop into pneumonia, tuberculosis, heart disease, rheumatism, Bright's disease, ear infections, mastoiditis, nervous affections and sinus disease. These are not all but are some of the most frequent and most serious complications. In children, abscesses of the ear and mastoiditis are frequent complications of common colds.

Sinus disease is prevalent and it is secondary to mouth or nasal infection. It is often a complication of a cold, grip, pneumonia or an infection at the root of a tooth. There are four nasal accessory sinuses: the frontals, the ethmoids, the sphenoid sinus, and the antrum, or maxillary sinus. Infection of the antrum is the most common sinus disease. There is usually a headache and nasal discharge in such conditions. In frontal sinus disease, there is generally a sharp pain over the eyes during a certain period of the day. When its cycle is established in the individual, it is so regular that a watch may almost be regulated by the pain. It may begin at 11 a. m. and stop at 4 p. m., or some such hours, and these hours are a constant for that person. After 4 p. m. there is no pain again until it begins the next day at 11 a. m. or at whatever hour it gets started.

There is not the same regularity of pain cycles in the other sinus disorders, but none of them are characterized by pain at night. In antrum infection, there is usually a dull pain over the cheek of the affected side, with a profuse pus discharge. The color of the discharge varies with the type of infection. In nearly all sinus infections the vision is affected. Serious posterior sinus disease occasionally has a marked effect on the eyes, sometimes even causing total blindness. Sometimes persons whose vision has entirely gone see as usual after treatment has cured their sinus disease.

Frequently in sinus infections there is a foul odor to the nasal discharge. This is especially true of subacute or chronic sinus disease of the antrum of dental origin. With drainage and appropriate dental care, these cases clear up more rapidly than those of nasal origin.

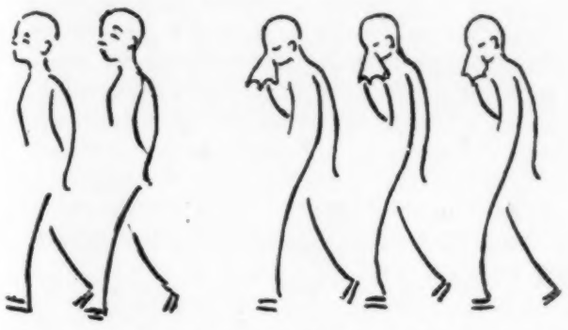
Buy an island and take up sun-bathing

The best treatment of sinus disease is prevention. In the first place, do not neglect head colds but consult your physician in their early stages. Do not neglect your teeth but keep them in good condition by appropriate dental care. In the treatment of sinus disease too early or too ambitious surgery has been done on the sinus. The use of iodine powder, under the physician's direction, has cured many cases without radical surgery.

Again let me emphasize the importance of maintaining normal health in the prevention of

these disorders. Get plenty of fresh air and sunshine, and do not carry or harbor chronic infections. In other words, get rid of debilitating handicaps that pull down body resistance.

Thousands of years ago, in the sacred books of the Hindus, a health-giving and rejuvenating effect was attributed to the sun's rays, which were credited with restoring vigor to the muscles of the aged and enlivening their minds. Indeed, a belief in the healing and conserving properties of sunlight can be traced in many of



Three fifths of the population have at least two colds a year.

the nations of remotest times, not only in Europe, Asia and Africa, but also in America, where both in Mexico and Peru the sun was worshiped as one of the principal deities. Everywhere we can trace the sun's rays as the driving agency to all living creatures and the source of all forces on earth.

The present-day practice of wearing few clothes and exposing as much of the body to the sun and air as possible is splendid. This can best be accomplished at the seashore or on high mountains. In our cities there is so much dirt and smoke in the air and so many tall buildings that we get too little effect from the ultraviolet rays of the sun. At certain resorts the men are accustomed to expose their entire bodies, with no clothing except trunks, to the sun's rays. This, in combination with the salt water bathing, is ideal. These men are tanned the color of bronze and it is difficult to find more healthy and splendid specimens of strength, health and vigor than they present.

If you cannot enjoy these ideal privileges, the next best thing is to lie down in the sun in your back yard. If the natural sun's rays cannot be had, the same effect may be obtained by exposing the body to the ultraviolet rays of the quartz lamp. Sun baths, either natural or artificial, must be used with discretion under a physician's care, and the surface exposed gradually so that a burn will not be inflicted.

I know of no single influence of greater benefit to the whole body than exposure to the sun's rays.

It is of paramount importance in the maintenance of good health and the prevention of colds to be free from chronic infections, especially mouth infections. It is necessary to have sound teeth. Chronic infections at the roots of dead teeth are a great menace to the general health.

When the age of 40 or 50 years is reached, there are likely to be body changes, and these are augmented by chronic infections. At this time of life, if vigor of mind and body is to be maintained, all possible handicaps must be eliminated. Therefore, it is necessary to eliminate the teeth as sources of chronic infection by appropriate dental care. Have the dead teeth extracted.

The chronic infections in tonsils should likewise be removed. The constant absorption of the toxins from these infections has a deleterious effect on the general health and those who have infections are constantly subjected to secondary infections, as colds and sinus trouble. Young children with constant colds are frequently relieved by the removal of the tonsils and adenoids. In adults, the removal of tonsils is important in cases of chronic infection.

The influence of fatigue in the causation of colds and sinus trouble is great. If you would prevent colds, do not work to the point of exhaustion for it uses up the reserves of body strength and lets down the natural barriers of resistance and immunity to colds and their complications.

Plenty of sleep is absolutely necessary for the maintenance of good health. Sleep rests all the organs of the body and each night's rest restores the body in strength and vigor, which is so important to maintain immunity and resistance to colds and infections.

A daily shower is desirable; umbrellas and rubbers are unnecessary.

Another great factor in the prevention of colds is the proper and sufficient elimination of the body poisons by means of the proper action of the kidneys, skin and intestines. This is best accomplished by drinking a sufficient amount of pure water, eating proper food in moderate amounts and taking appropriate exercise.

In regard to clothing, it is advisable to wear just enough to be comfortable and to wear overcoats and wraps when going out. The average healthy adult may wear the same weight of clothing all the year. The aged or debilitated,

however, must wear warmer clothing when the cold and changeable weather approaches. It is of especial importance not to overdress or overcover children.

Fresh air should at all times circulate freely in every room. Dry and cool air is the best. The temperature of the room should be about 68 F. Once or twice a day, open the windows to allow a free circulation of fresh air. When walking, breathe deeply through the nose in order to fill the lungs with much needed oxygen and to allow them to throw off the waste products of respiration.

General cleanliness is essential to good health. It is especially important to wash the hands frequently, and always before eating. The hands are constantly contaminated by ever-present infection and they must be cleansed before handling food.

A daily shower or tub bath is desirable for most people. There are some, however, for whom too much bathing produces an abnormal dryness of the skin. If the constitution can stand it, a cold shower in the morning tends to harden the skin and prevent colds.

If, in spite of your utmost care to keep normal, you are constantly catching cold, your physician should be consulted. Sometimes there may be a special susceptibility to specific bacteria or to other substances. In such cases tests should be made to determine the offending substance.

In some cases, especially when chronic infections are present, the administration of vaccines may help build up immunity to colds. In striving to maintain a normal, healthy body, periodic examinations and frequent consultations with your family physician are helpful. Such examinations may reveal slight impairments, which can be readily cured when discovered in their incipiency. A cold may be aborted if local treatment is administered to the nose and throat as soon as the first symptoms appear.

Why We Perspire

By J. R. Earp

OUR faces perspire a great deal more freely than our armpits. Moisture collects in the armpits because it has no chance to evaporate, while the moisture on the face is rarely detected, although more abundantly produced, because in the freely circulating air it is evaporated as quickly as it appears. This discovery is only one of several interesting observations on human perspiration made during the last eight years by Professor Kuno of the Manchuria Medical College and reported by him to the last convention of the Japanese Association for the Advancement of Science.

Perspiration a Natural Thermostat

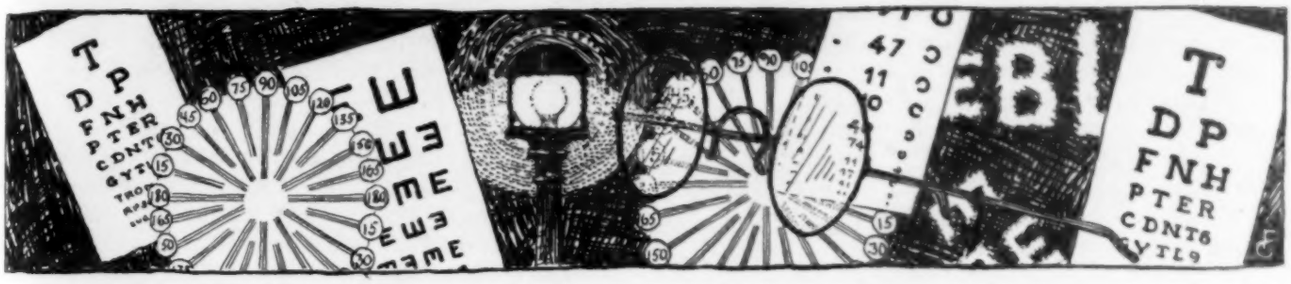
These observations confirm the belief that perspiration is concerned with the regulation of body temperature, a sort of natural thermostat that prevents us from getting too hot. Parts of the body most difficult to keep cool, because they are the thickest, are those that perspire most freely when we become too hot. These parts are the head, neck and trunk.

In the palms of the hands and on the soles of the feet, the sweat glands seem to have a different function. When the body is not overheated most of the sweat glands are idle, but on the soles of the feet and the palms of the hands these glands are particularly numerous and there is always a steady, if imperceptible, output of fluid. Dr. Kuno thinks that this is to prevent the thickened skin of these areas from becoming too dry and cracking, as it sometimes does when very cold weather stops the secretion from the glands and we suffer from chapping.

Mental Stress Causes Hands to Perspire

When the room is hot and all the other sweat glands are busily working overtime, the glands of the hands and feet do no extra work. On the other hand, when mental arithmetic is required, the first of the sweat glands to spring into action are those of the palms of the hands. Dr. Kuno describes this reaction as due to mental stress. There is a phrase in the Japanese language "with sweat in the clenched hands," which means "with suppressed excitement" or "with breathless interest."

The Japanese professor suggests that the purpose of this mental sweating is to give a better grip, that in the old jungle days of *sauve qui peut* it was a definite advantage to have a little extra moisture on the soles of all four feet. A modern laborer sometimes wets the palms of his hands with spittle when he is about to tackle a heavy job. It is true that the body can be made so hot that the palms can be stimulated to perspire; also that mental stress can become so great that sweat drops will appear all over the body. But these are reactions to extreme conditions and do not seem to represent the normal functions of the glands.



You Must Act at Once in GLAUCOMA

By Fassett Edwards

GLAUCOMA is a disease of the eye causing 15 per cent of the total blindness in this country and about 50 per cent of the blindness of all our adults. It is indeed a highly important disorder. This insidious condition, like a thief in the night, creeps upon its victims, attacking the eyes of those who are 35 or older, by starting a series of gentle disturbances that pass almost unnoted.

The victim thinks he has a touch of pinkeye or something unimportant with possibly a little blurring of the sight. This passes away and he forgets all about it; and the eye seems normal for weeks or months. Then comes a repetition of the trouble, with a small increase in intensity, and from then on appears attack after attack, each one more severe than its predecessor, until finally treatment cannot be put off longer.

About this time the poor fellow thinks his glasses may be at fault, for his sight doesn't seem quite so good as it was. He goes to an optician, and another pair of glasses is brought home and exhibited to his wife.

But, sad to remark, it is not a case for glasses, whatever he and the optician may think. A serious matter is confronting him, a job for a skilled eye specialist who will searchingly peer into all the symptoms, bring out the history of former attacks, endeavor to run down the more or less vague clues, and taking all of them into consideration, will reach a diagnosis.

In the belief that an eye specialist's record of a case of glaucoma may be of interest, let us look at the history of a patient who for some months has felt pains in his left eye. His sight has not yet been affected. Four months before he visited an ophthalmologist, the attacks began to occur frequently and each was accompanied by severe pain. An optician fitted him with glasses, but these did not help in the least. He began to see circles about street lights and later to note prismatic colors about lights seen against a dark background. The eye specialist found that his vision was much reduced and a measure of the tension of the left eyeball, which was taken, showed a marked increase. This is one of the special signs of glaucoma.

A couple of weeks later the patient became greatly depressed by some bad news and had a severe attack of the pain. The physician again examined him and found that the left eyeball had a steamy appearance and that the tension was increased. He recommended that an immediate operation on the iris be done. This did not relieve the patient, the tension increased as did the pain, and the physician removed the eye. After this, steady improvement was noted, and no symptoms were found in the right eye, but the patient was advised to return if he experienced the least pain in this eye.

Glaucoma is a tragic thing. If untreated it ends in but one way: that sinister thing that we shudder to mention—blindness. Early in the course of this disease, given an accurate diagnosis, it is not so difficult to treat the eye and the patient so as to save the sight.

But glaucoma is imperious; it will not tolerate delay or trifling, and an error in diagnosis is fatal to the sight. Even the capable general practitioner of medicine now and then overlooks glaucoma until it is too late to save more than a small amount of sight. And even this small salvage may not be possible.

Primary glaucoma is common, making up about 1 per cent of all eye disease, mild or serious, in both old and young. Its prompt and accurate recognition is obviously of the greatest importance to the general medical man, who generally is the first to see the condition. But it is unfortunate that frequently glaucoma is confused with iritis, or inflammation of the iris (the colored part of the eye); this happens because iritis often accompanies glaucoma. But it is most unfortunate that the medicine that

is so highly beneficial in iritis is the worst possible treatment for glaucoma. Again, glaucoma is often mistaken for a primary cataract, and the period of waiting for the ripening of the nonexistent cataract allows the sight to be lost.

The first thing to recount in a methodic consideration of glaucoma is a list of its symptoms, for which every one more than 40 years old should keep a sensible watch. Don't think that every little pain or annoyance in your eye is glaucoma; but if that pain is repeated, consult your ophthalmologist without delay. Delay at this stage is dangerous, and it may prove costly.

Symptoms of Glaucoma

Dimness of sight is the first thing noted by the patient. At times there is a cloud before his eyes, and if there is a light in the room he may see a colored halo around it. This phenomenon may be accompanied by a feeling of fulness in the afflicted eye or there may be a dull frontal headache, or both. If the eye is studied at this time, it may be found to have a slightly steamy cornea (the clear, glasslike front of the eye) looking perhaps like glass that has been breathed upon. This cloudiness is most often to be seen in the center of the cornea and is what interferes with the sight and gives the colored halo about lights, such as is seen when one looks through fog at a street light. It is really a circular rainbow in the eye.

At this stage the pupil of the affected eye is larger than that of the unaffected eye. The eyeball to the touch feels firmer or harder than the well eye. This symptom is of highest importance. The white of the eye may look red and congested.

The passage of a few hours may bring the end of this attack, and the eye and its function may apparently return to normal. When the attack will return is variable—it may be weeks or months—but the trouble-free period in all probability will not be long. Sometimes definite reason may be found for the precipitation of these attacks, such as late hours, overeating, emotional reaction and working in a dim light.

In advanced cases the attacks may appear every day, or the poor victim may say that he sees worse in the morning and his sight gets better as the day wears on, or this process may be reversed. Sleep always cuts short the attack. Between attacks the sick man complains that to see near by, he must have stronger and stronger glasses. Neglectful persons allow this condition to go untreated for years, but in all cases in which there has been neglect permanent damage to the eyes occurs. Sight cannot be restored.

The savage attack of acute glaucoma appears after the introductory and perhaps slight premonitory warnings have been endured unheeded and have gone into the limbo of forgotten discomfort. Acute glaucoma is accompanied by almost unbearable pain in the eye, and this pain radiates over the head to the ears and teeth and is often mistaken for neuralgia or neuritis. The patient cannot eat; to sleep without drugs is out of the question. When such pain starts, the sight falls away rapidly until the patient sees only large moving objects, such as a hand waved before the eyes. It is as if he is looking at the world through a tube, for the visual area is markedly reduced.

The eyes become dusky red, the pupils are dilated, and the cornea lacks luster and is insensitive to the touch. The dilated pupil may be at the center of the eyeball or it may be decentered, and it shines with a greenish-gray color; hence the name given it by the ancient Greeks. The eyeball at this stage is hard, and unless treatment is instituted promptly and successfully it will remain hard, will be painful and the patient will be blind. In such cases the eye is usually promptly removed because of the severe pain. In many cases an attack on the other eye will follow.

Cause Is Unknown

The cause of glaucoma is unknown. There are many theories but all of them have objections as well as plausible points. One of the latest and most watertight is that the body of a person who has glaucoma is lacking in lime, and that this shortage in calcium reacts on the sympathetic nervous system that controls the amount of fluid entering the eye. We get our body lime from food and drink. A French eye specialist has poetically placed his expert finger on one of the high spots of glaucoma in saying that this disease means a sick eye in a sick body.

So, if the fluid continues to pour in the eye without due control from the circulatory system and it cannot escape with equal speed, it is clear that it will be dammed up within the eye and bring about increased pressure in an organ that will not tolerate more than a little excess pressure. Pressure is fatal to the integrity of the optic nerve and, sequentially, to the sight. This pressure causes the pain and reduces the sight.

With special instruments ophthalmologists may easily measure the internal pressure of the eye and may readily diagnose glaucoma if they are given a chance. But if Mr. John Citizen keeps himself at home with the hot water bottle when his eyes pain, he runs the risk of allowing irreparable damage to be done to those precious organs. A little attention at this stage will prove an excellent investment.

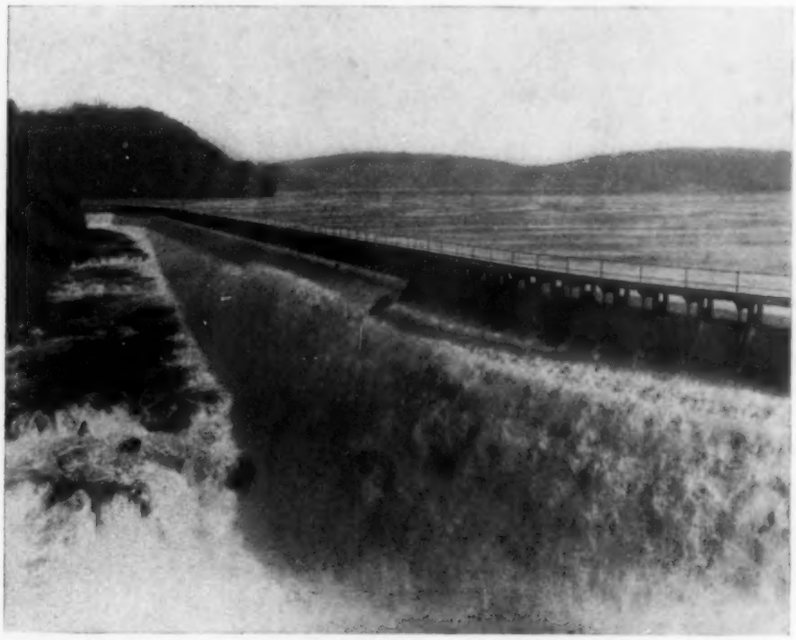
The public in general is fairly well informed about cancer, for it has been a painfully popular subject for a long time. But few people know much about glaucoma, and it is time that they should know. A deadly parallel runs between these two curses to mankind—they start slowly, give ample warning that they are at their work, and both may be successfully treated if they are taken in hand early.

PURE WATER—Best of All Drinks

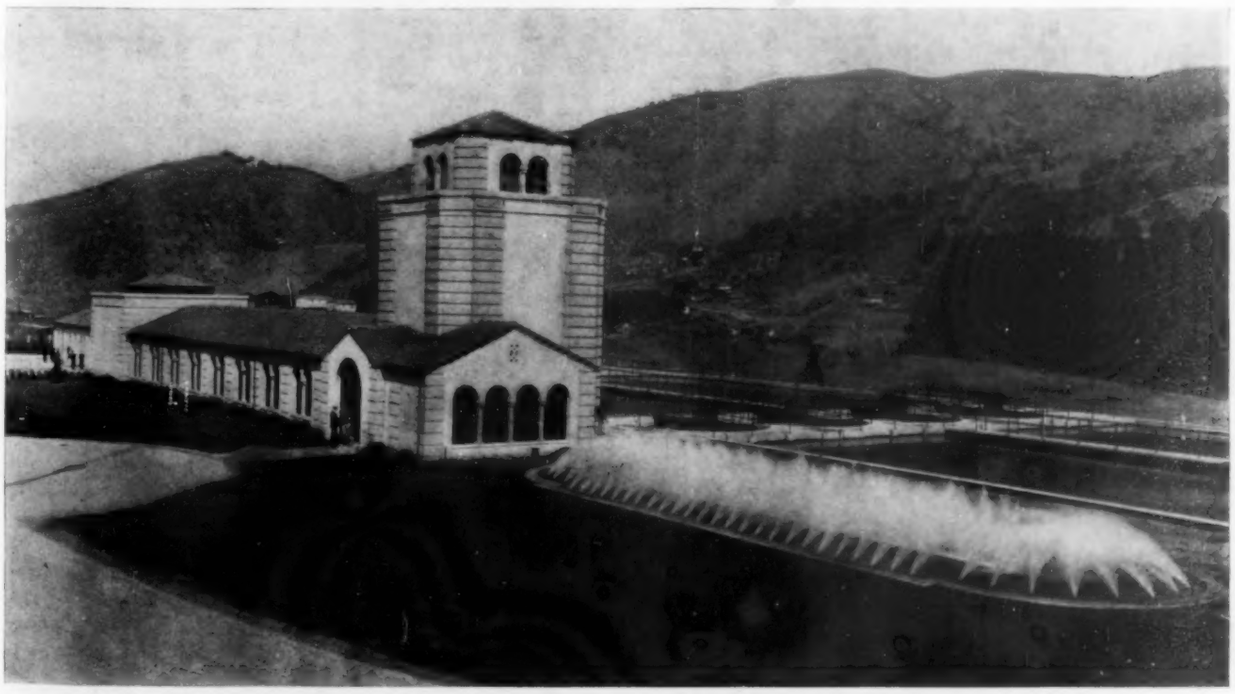
By the late George C. Whipple; revised by John F. Norton

ALTHOUGH water is necessary for the maintenance of life, all kinds of water are not equally desirable. What may be called pure water used to be regarded more or less as a luxury, but today purity is conceded to be a perfectly proper demand on the part of the consumer.

The ideal water supply is one that is hygienically safe, attractive in appearance, tasteless and odorless, does not corrode distributing pipes, is comparatively soft and does not contain any ingredient, such as iron, in quantity sufficient to make it unsuitable for manufacturing purposes. A public water supply that conforms to these requirements is an asset to a community. It is not always feasible to provide an ideal water. Cer-



Croton dam, a part of the Newark, N. J., water supply system.



Aerators and settling basins of the East Bay municipal utility district, San Leandro, Calif.

tain of the foregoing requirements may have to be modified under practical conditions.

It has been known for seventy-five years that certain specific diseases are spread by sewage-contaminated drinking water. The most important of these diseases are Asiatic cholera, dysentery and typhoid fever. The first is of little importance in the United States at the present time, but typhoid fever still occurs in both urban and rural districts. In addition to these three diseases, intestinal upsets, many of them of undetermined cause, may follow the use of polluted drinking water.

Although typhoid fever may be spread by milk, other food, flies or by direct contact, the most important means of transfer until a comparatively few years ago was by drinking water. The increased use of water purification processes as applied to municipal supplies has been responsible to a large extent for the decrease in the death rate from typhoid fever in the United States during the last thirty years.

The first characteristic of a water to be used for drinking, for brushing the teeth, for cooking and for the miscellaneous uses of the household is freedom from the germs of disease; that is, hygienic purity. In addition, it should not contain any poisonous metals such as lead. Bitter experience has shown that water may cause typhoid fever by transporting the living typhoid germs from some person sick with the disease to some well person. This is a simple mechanical transfer of the germs. The water plays no part other than that of floating the tiny bacteria along, unless we may say that it keeps them from drying up. Typhoid germs do not multiply in water but, on the contrary, die out gradually and so lose their power to do harm. In addition to typhoid fever, dysentery and cholera, some of the milder forms of diarrheal diseases may also be water borne. The germs of these diseases vary in their ability to survive in water: some may live longer than the typhoid germs, others die more easily.

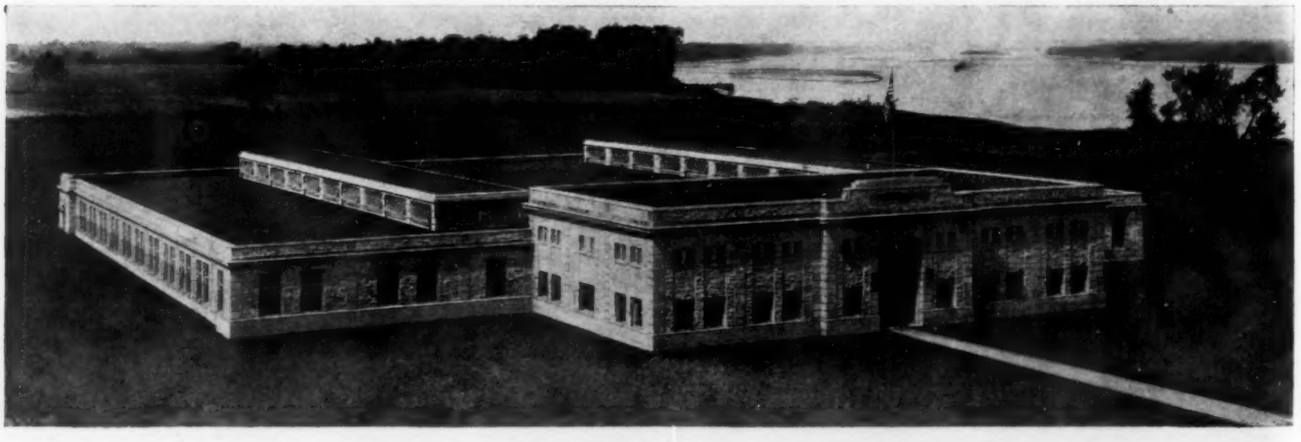
The germs of these diseases leave the bodies of sick persons or of well persons who are carriers, in the urine and bowel discharges. Sewage is thus always liable to contain them. If sewage finds its way into a lake or a stream or if the contents of a cesspool or water closet soak into the ground and percolate to some well, the germs may be carried along, ready to start the disease in some one who drinks the contaminated water. Polluted water does not always cause disease but it is always potentially dangerous and should not be used unless carefully purified.

Wholesome water should be free from poisonous metals. Lead is the most important one to be considered. Some waters act on lead pipes, especially those soft well waters that contain much carbonic acid. Lead accumulates in the body so that even if the water contains only minute quantities of the metal, lead poisoning may eventually result. If a water causes a coating to form on the interior of a lead pipe, there is little or no danger of lead poisoning because the coating protects the metal; but if the lead stays bright, it indicates that the metal is being dissolved and this is a dangerous condition.

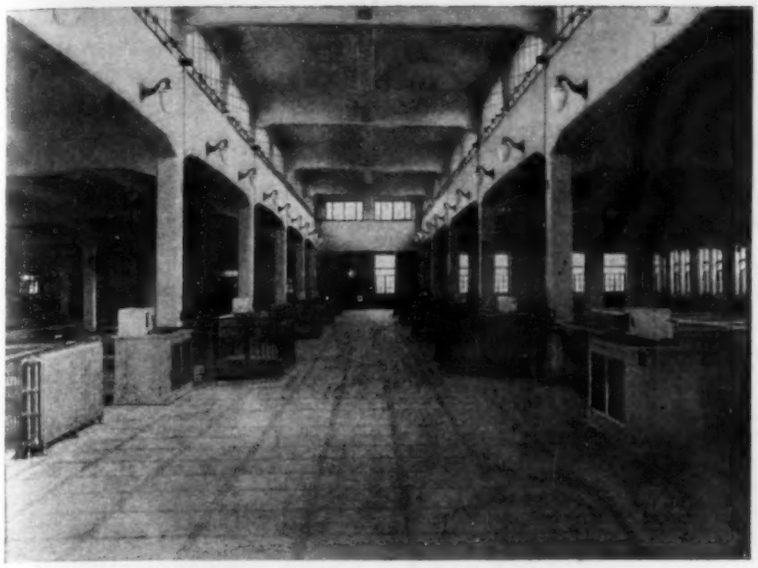
It is not sufficient that a water supply be safe to drink. It should be clean, so that people will enjoy drinking it. In spite of published advice and posted warnings some persons will choose for drinking the waters that are most palatable. If a public water supply is not attractive they will turn to other sources; they will use local wells, which in a crowded community are likely to be dangerous, or they will purchase spring water at considerable expense. The germs of disease are invisible to the naked eye and may be present in water that looks clean.

A public water supply should, therefore, be clean and palatable. Preferably it should be cool as well.

The rain that falls on the ground and runs over the surface washes up clay and all sorts of dirt, sometimes in large amounts. The little



An exterior view of the Howard Bend filtration plant, St. Louis.



An interior view of the Howard Bend rapid filter plant, St. Louis.

rivulets become muddy almost everywhere after a rain and in regions in which there is clay soil great rivers bear immense loads of silt and are always turbid. All through the Middle West and in the South the surface waters are unclean and are seldom suitable to be used in their natural condition as sources of public water supply. When water contains particles of dirt so numerous that the water is not clear it is said to be turbid. Turbidity may result from natural causes or from pollution.

A water may be clear and yet unclean. Examples of this are found in swamps where peaty matter and dead leaves are extracted by the standing water to form what has been called a vegetable tea. This brownish matter is in a state of solution the particles in which are so small as to be beyond power of a microscope. Waters that contain extractive matter are said to be colored. Colored waters are objectionable because they suggest uncleanliness and because the organic matter that produces the color also gives a vegetable taste to the water, which is unpleasant. It is seldom that waters are turbid and colored in this way at the same time, since the color comes from a slow seeping process.

Clean water has neither taste nor odor. Turbid waters have an earthy taste and stained swampy waters have a vegetable or peaty taste. But there is another cause of tastes and odors more important than either of these; namely, the microscopic organisms that grow in lakes and reservoirs and slowly flowing streams. Some of these organisms are vegetable, others are animal. The vegetable forms are known as algae; the animal forms, as protozoa and crustacea. Of the many kinds found, only a dozen or so are of practical importance from the point of view of bad odors, and most of these belong to the group known as algae.

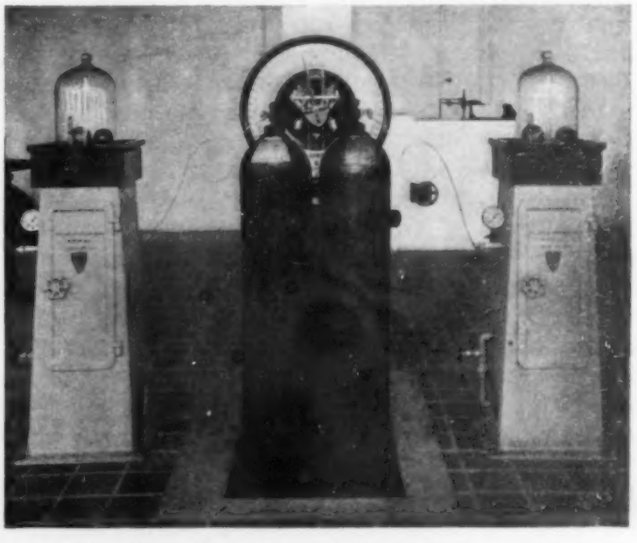
The algae sometimes occur in enormous numbers and make the water foul. The odors are due chiefly to oily substances in their cells but sometimes to the decay of the organisms. Thus the pleasant perfume of the rose is due to an oily substance known as attar of rose. We might with equal truth say that the smells in reservoirs are due to attar of algae. A rose, when it decays, has a disagreeable smell. So do algae when they decay.

There is no reason to think that algae cause disease but water that contains them is nevertheless unclean. The algae problem is often a serious one but it is possible to solve it.

Ground waters sometimes have an odor of sulphur because of the presence of hydrogen sulphide. This is unpleasant but not dangerous to health.

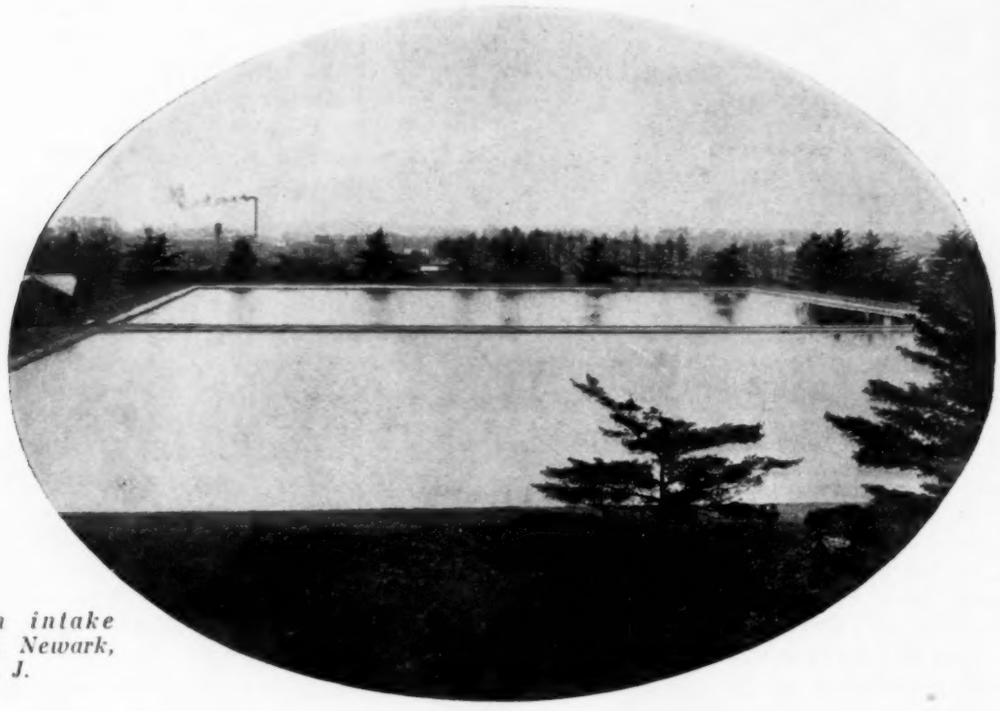
Waters are sometimes made unclean by polluting substances. Sewage pollution is, of course, the worst form of pollution, for it is dangerous as well as unclean. Factory wastes of various kinds may make the water of a lake or a stream unclean. Thus the sulphite liquor discharged from a paper mill may so taint the water of a river that the odor is noticed several miles down stream. Wastes from gas manufacture may cause tastes as a result of the presence of phenolic compounds. Other trade wastes may impart color or turbidity to water into which they are discarded.

Almost all natural waters contain mineral matter in solution. The quantity found depends largely on the geologic character of the region from which the water is collected. The amount of mineral matter present is seldom large enough to influence the health of those who drink the water, because as a rule persons do not like the taste of water that contains mineral



Duplicate chlorination at the Charlotte, N. C., filter plant.

matter in quantities large enough to be of importance. When the mineral matter is sufficient in amount to be noticed by taste or to have a distinct physiologic action, the water is said to be a mineral water. These are seldom used as public supplies.



Macopin intake reservoir, Newark, N. J.

Certain salts have definite effects on the body, as sodium sulphate, magnesium chloride and sodium carbonate, and in some waters the amounts are large enough to be of importance. The salts that make a water hard—the carbonates and sulphates of calcium and magnesium—have less effect. Persons changing suddenly from a soft water to a hard water, or vice versa, are sometimes subjected to disturbances of the bowels, but this action is usually temporary.

A much discussed question is the relative healthfulness of hard water and soft water. Those who advocate hard water claim that the use of soft water fails to provide the human system with sufficient lime for bone formation and for other physiologic necessities, while those who advocate distilled water, which represents the extreme of softness, claim that it is a better solvent and that hard water causes various urinary troubles. Although it is an important question, the data for forming a true opinion are difficult to obtain and such as have been obtained are conflicting. The obvious conclusion is that, within the limits of ordinary experience, the hardness of water probably has little physiologic effect on those who regularly use it.

There are sound practical and economic reasons, however, for preferring soft water to hard water. Hard waters waste soap, cause boilers to scale and in various ways interfere with chemical industries. Hence, hard waters cause an economic loss to a community, a loss that might be prevented by softening the water.

On the other hand, a water may be too soft. A very soft water is more likely to corrode the pipes and metal tanks through which it flows and is thus more likely to produce lead poisoning and rusty water. This brings up another property of water that contains certain kinds of mineral matter in solution—its corrosiveness. Magnesium chloride is a salt that imparts this property to water. Ground waters near the seacoast sometimes contain this salt. Dissolved carbonic acid gas often causes corrosion.

Water analyses are made to determine the nature of the foreign matter present. Many different tests are applied, some simple and some quite difficult to make, requiring the services of an experienced chemist or bacteriologist. The tests used to determine the hygienic purity of a water supply, whether chemical or bacteriologic have as their immediate object the detection of sewage in the water. If chemical compounds or bacteria characteristic of sewage are present, the water is condemned since such supplies are potentially dangerous. The typhoid germ is difficult to find, even with the expenditure of much effort.

To establish standards of purity for water supplies is a difficult undertaking. No natural water is strictly pure. We desire perfection, but practically we are unable to attain it. Our ideal of clean water is a water with no turbidity, no color, no taste and no odor, yet we are often willing to accept a water in which the turbidity does not exceed five parts per million, the color

does not exceed twenty parts per million and the odor is very faint. Some might accept these as standards of purity; others would not. For a ground water they would not hold, but for a purified swamp water the reduction of the impurities to these figures might be regarded as satisfactory.

Again we prefer sterile water, but it is practically impossible to find sterility in nature, certainly not in surface waters. We cannot insist on absolute perfection. For administrative purposes it is necessary to have rules for exclusion, or what might be termed minimum standards. The U. S. Public Health Service has established standards for its own use in interstate commerce; that is, on trains and boats. These standards are widely used for public water supplies. They depend upon the absence of certain characteristic sewage bacteria (colon bacilli) in specified amounts of water, together with requirements regarding the source of supply and some physical and chemical properties.

Contamination of Surface Waters

Surface waters are, in general, softer than ground waters but they are always subject to pollution no matter what precautions are taken for protection. Some form of artificial purification should always be required. The examination of a single sample does not give sufficient data on which to pass judgment. The larger the number of samples tested the more dependable the results.

Private wells need protection against pollution by fecal matter. The greatest danger is from entrance of foul water at or near the top of the well. This can be guarded against by causing the ground to slope away from the well curb, by providing a water-tight cover and by making the sides of the well water tight for a few feet down from the top. Wells should not be located near cesspools, water closets or manure piles, but no actual pollution of the well water is likely to occur unless the ground is gravelly or unless the well is located in rock that contains seams or channels as does limestone. The slow passage of sewage through fine, porous material tends to remove bacteria. This is due to filtration and to the natural death of the germs during their slow passage through the soil.

Driven wells in sandy soils are almost invariably safe. Wells in a limestone region are always subject to suspicion. Polluting substances may travel in open channels in the ground for long distances. Wells in clay regions in which shrinkage cracks may occur must also be watched.

The surest and best method of safeguarding the quality of a public water supply is by artificial purification. Wonderful strides have been made in this art during the last thirty-five years. Our American water supplies are so varied in character that a number of different processes have been perfected, and it is safe to say today that almost any water can be purified and made safe and wholesome.

When water is stored in a reservoir or basin a certain amount of purification takes place. This is due largely to settling. While a stored water may be less dangerous than an unstored one, reliance cannot be placed on this method. Either filtration or chlorination or both must be utilized.

Methods of Purification

Two methods of filtration are in use for public water supplies. One of these consists in passing the water through a bed of sand, which has been carefully selected. In a short time a slimy, gelatinous material forms at the surface of the sand and acts as a filter to remove germs. Very pure water may be obtained in this way but a large area of land must be available and the labor costs of the maintenance of the filter are likely to be high as the surface of the sand bed must be cleaned from time to time.

The other method involves the addition of alum and sometimes a weak alkali. A flocculent, or woolly, precipitate is obtained. This precipitate absorbs color or suspended matter, including bacteria, from the water and is itself then removed by settling and filtration. None of the alum remains in the water at the end of the process. The filtration is carried on at a rapid rate so that relatively little filter area is required. At the present time this process is generally preferred to the first one described.

No matter how pure a water may be at its source or how carefully it may have been filtered there is always some chance that sewage contamination may occur at some point. Final protection is afforded by chlorination. This consists in the addition of a small amount of chlorine (usually less than one part of chlorine in one million parts of water and sometimes as little as two tenths of a part of chlorine) to the water before it passes into the service mains. Chlorine is a disinfectant and will serve to eliminate any harmful bacteria that may have passed through the filter or casually entered the supply. The chlorine will remain in the water long enough to protect against seepage into the mains, in case such an unfortunate condition exists. By the time the water reaches the consumer, only traces of chlorine should be found. The amount of chemical used is perfectly harmless and its use is recommended for all public water supplies.

The reduction in the death rate from typhoid fever in cities of this country and of Europe is sufficient evidence to warrant the comparatively small expense required for satisfactory artificial purification.

Science Resurrects a Dead City

By Eloise Liddon Soper

Ewing Galloway

Draining the marshes destroys the breeding places of mosquitoes and renders the land more suitable for cultivation.

AMID the loud chorus of praise raised to the recent achievements of science we are beginning to hear, now and then, a dissenting voice. A minority, still small but increasingly vocal, ventures to declare that the world was a pleasanter and more comfortable place before the scientists began to devote themselves so whole-heartedly to improving it.

Certainly to those inhabitants of modern apartment houses who are so old fashioned as to wish to spend an occasional quiet evening at home over a book or to go early to bed for a long restful night, the radio and the phonograph can hardly seem unmixed blessings. And many must feel that even the motor car, necessary as they may now find it in their daily lives, has brought more harm than good in its train when they see the long lines of "hot dog" stands, gasoline stations and advertisements that now disfigure our roads and find that once beloved spots in the country have lost forever their quiet and peace and natural beauty.

There is, however, one field of scientific achievement that is exempt from all such criticisms. The great discoveries and accomplishments in medicine and the allied sciences have brought only good to mankind. And if it is argued that the advance in these directions has been a part of the general onward march of science and that one could scarcely have taken place without the other, most of us will agree that the countless lives saved and the immense amount of suffering that has been prevented more than outweigh the inconveniences of modern life.

Last summer I saw a remarkable illustration of the fact that science has been able to render some parts of the earth's surface that were once almost uninhabitable not only safe but pleasant places to live in.

About 15 miles from Rome, on the edge of the Campagna and at the mouth of the Tiber, lies the town of Ostia. It would be more nearly correct perhaps to say the two towns, for there are two Ostias side by side: one the bare bones of a dead city and the other a still small but living and growing town. The abandonment of the first town was due at least in part to malaria and the rise of the second is the result solely of the triumph of science over that disease through the eradication of the malaria mosquito.

A corner of the ancient theater at Ostia, looking toward the stage.

In the days when Rome was mistress of the world, Ostia was her chief commercial and naval port. At the height of her prosperity, Ostia had a population of 80,000 and her harbor was crowded with vessels from all the ports about the Mediterranean. It is thought that there could not have been much malaria in the city during this period, for there is no mention of it by any of the ancient writers. Most authorities agree that malaria did not become prevalent in the Campagna until agriculture had begun to decline. An interesting graph has been prepared showing that the decline in the cultivation of the land and the increase in malaria were closely parallel. At any rate, by the time of the fall of Rome, the Campagna was largely depopulated and given over to malaria and Ostia itself was fast falling a prey to that disease. The passing of the power of Rome left the port defenseless against the attacks of pirates and barbarian marauders. The inhabitants found the double struggle against invasion and disease too much for them and the city was gradually abandoned.

Today the extensive ruins of the old town are second only to those of Pompeii in affording an insight into life in an ancient Italian city.

The life in Ostia was very different from that in Pompeii. The latter was a provincial town, originally a Greek settlement and always more or less Hellenistic in character. Ostia was a crowded, cosmopolitan seaport, many of whose inhabitants lived not in one or two story private houses, as at Pompeii, but in flats built in blocks several stories in height. The upper portions of the buildings are gone but the lower walls stand in a state of preservation that seems the more remarkable when one considers that Ostia has not had the protection afforded Pompeii by the deep blanket of ashes which destroyed that city and which, at the same time, preserved it.

The Appian Way runs for many miles straight across the Campagna.

At Ostia, as at her sister city of southern Italy, one can trace the plans not only of dwelling houses but of temples, shops and baths. The theater has been restored and classical plays are occasionally performed there.

Owing to the importance of its situation with reference to Rome, a number of efforts were made during the Middle Ages to reoccupy Ostia. A castle was built in the fifteenth century to defend the mouth of the Tiber and colonies of monks made repeated attempts to settle in or near the deserted city. But malaria was too strong an antagonist.

The present renaissance of the city began less than half a century ago. In 1884, the Italian government sent to Ostia a colony of 600 persons recruited from the Romagna, the region around Ravenna, the object being to try to reclaim the surrounding land for agricultural purposes. Natives of Romagna were chosen for the task, because owing to the marshy character of the district its people had had much experience in reclamation work.

The colonists found only three inhabitants in Ostia, all of whom were affected by malaria. One was the keeper at the castle and the other two were coast guardsmen. They said sadly to the new arrivals: "You have come to the Valley of Death." And so it proved, for many of the 600 died. There is now on the outer wall of the castle yard a tablet commemorating in simple

but moving language these first humble martyrs to the cause of bringing back a waste land to the uses of civilization. Following is a literal translation of the verses:

They cry
And holding aloft the tools of their fatigue
Men, women and children,
A peaceful army
From the quiet fields of Romagna, came
To restore to cultivation, hygiene and modern civilization
The land that was strewn with ruins by ancient civilization,
Indolently forgotten by Princes and Priests,
Wilfully neglected by Governments,
And abandoned
To homicidal malaria,
Where all found bread and work but many also death!
To the Dead
Is this tablet dedicated,
To the Living
The hope that their work
May continue to be fruitful.
Oh, Romans
And strangers, who with bowed heads admire
In visiting the ruins of the ancient civilization,
Turn your gaze from the secular ruins
To the heavens
To greet and honor
The pioneers and martyrs of
The new civilizatin of the Eternal City.

The efforts of these first colonists proved beneficial for agriculture but had little effect on the malaria. It was not until Ronald Ross, a few years later, discovered that malaria is transmitted by mosquitoes that rational methods of combating the disease could be devised.

Antimalaria work of the most thorough and scientific character is now being carried on not only at Ostia but throughout the Campagna by the Italian government in conjunction with the Rockefeller Foundation.

The success that has attended these efforts at Ostia has been striking. Malaria has been banished and the town is rapidly developing into an important sea bathing resort. As it is the only one within easy reach of Rome, it may look forward to a most prosperous future. A well-built, attractive town has sprung up along the shore and happy children now race up and down the once deserted sands. More than this, now that malaria has been driven out, the situation is found to be so healthful that sanatoriums for tuberculous patients have been established there. The government also maintains camps for children, at which boys and girls from the crowded quarters of the cities may have a glorious, health-giving vacation beside the sea.

The Campagna still seems to the visitor a desolate and almost empty plain. But here and there one can find cultivated tracts and thriving settlements and the number of these is growing in direct ratio with the success of the work against malaria. Part of this work consists in scientific drainage of the soil, which not only destroys the breeding places of the mosquitoes but renders the land more suitable for cultivation.

It is interesting to observe that the work against malaria at Ostia and in the Campagna is directed as much toward the economic improvement of the district as toward the betterment of health conditions.

Ewing Galloway

Farm huts on the edge of the marshes, which are being reclaimed by drainage.

"Growing pains" are always significant. They are either rheumatic or due to fatigue of the leg muscles from the strain of fallen arches or overactivity.

The Child with Rheumatism

By
Rachel Ash

MARGARET had always been a sturdy, cheerful, rosy-faced youngster until about the age of 9 when she began to lose weight. Indeed she became so thin that her playmates called her "Skinny." Once in a while she complained of pain in her knees or legs. "Growing pains," said her mother and grandmother; "Margaret is growing too fast." They blamed her rapid growth for her sudden crankiness and pallor.

But one day Margaret had a violent nosebleed, so severe that the doctor was hastily summoned. He did not rest content with stopping the nosebleed but after questioning Margaret's parents examined the child from head to foot. Then he said gravely, "Your daughter has been suffering from rheumatic fever. She now has a leaking heart valve and must be kept quiet until we are certain there is no active infection present."

"But, doctor," cried her parents in amazement, "we have never noticed any fever. Margaret has been perfectly well. Besides, we thought only old people could get rheumatism."

Then the doctor explained that the disease in elderly persons popularly spoken of as rheumatism is called arthritis by doctors. It is an inflammatory condition of the joints resulting in permanent damage. Rheumatic fever, on the other hand, is a generalized infectious disease that localizes itself in various parts of the body including the joints and subsides without joint deformity.

"Margaret is certainly not perfectly well," the doctor told the parents. "Growing pains are not normal in a healthy child, nor are loss of weight, pallor and irritability. Even the nosebleed is a danger signal, because of its not infrequent occurrence in the rheumatic infections of childhood. As for fever, rheumatism in children may at times be so severe as to result in a badly crippled heart or even in death without the temperature being noticeably high. Slight degrees of fever may not attract the attention of parents. Perhaps if nature would always present striking evidence of the disease such as high temperature or very painful joints fewer children would be running around while their hearts were becoming seriously damaged."

"Tell us all about rheumatism," begged Margaret's parents, "so that we can help Margaret recover and try to shield our other children from the disease."

Rheumatism, the doctor told them, results from the invasion of the body by some germ or toxic substance that may enter through a focus

of disease in nose or throat. This germ may settle in different regions of the body, and the disease varies according to the part affected.

If there is invasion of the joints or muscles, pain of varying degree results. In young adults the pain of the swollen joints may be so excruciating as to render the weight of the bedclothes unendurable. In children, on the other hand, the pains are often vague and transitory—no more than the occasional twinges in knees and legs of which Margaret complained. So-called growing pains are always significant. They are either rheumatic or due to fatigue of the leg muscles from fallen arches or overactivity.

When the infectious agent settles in the brain, signs of nervousness appear. The child becomes awkward, loses his steadiness of grasp and drops things readily. Annoying twitches of face and limbs develop. Such children are often punished by their parents for carelessness before the true condition is understood. Lack of coordination of movements increases until it is obvious to all that the child has developed St. Vitus' dance, or chorea. Temperamental changes appear. Such children cry easily and are always having their feelings hurt. This emotionalism and readiness to feel aggrieved, although most marked in cases of chorea, are present in other forms of rheumatic involvement.

Must Avoid Heart Complications

What we dread, however, is involvement of the heart. The greatest number of cases of heart disease in children are due to rheumatic infection. It has been estimated that approximately 200,000 children of school age in the United States have heart disease. Many of these cases could have been prevented by recognition and proper treatment of the early manifestations of rheumatism. Dr. St. Lawrence of New York has published an illuminating statistical study of two groups of children; the first, a group that was kept under observation from the onset of rheumatic manifestations while the heart was still normal; the second, a group that had received no adequate supervision prior to appearance at the clinic with definite heart disease. Children of both groups had suffered from some form of rheumatism but in the group under treatment permanent cardiac involvement was negligible as compared with the neglected group.

What is the proper treatment? It is rest under careful medical supervision until the physician feels reasonably certain that there is no indication of active infection. By rest is meant absolute rest in bed. Halfway measures are no more satisfactory in rheumatism than they are in tuberculosis. Once the physician is satisfied that the infection has come to a halt, the child is permitted to exercise within the limit of his endurance, to strengthen the heart muscle.

Since the germ of rheumatic fever may enter through the nose and throat, a child with frequent sore throat or other evidence of rheumatic infection should have his tonsils removed and should be watched carefully for any evidence of heart disease. The teeth of every child should be kept in first class condition, but it is especially important to prevent and treat dental caries in the rheumatic child. Every effort must be made to remove possible foci of infection.

May Live to a Ripe Old Age

We need not be too pessimistic about the child with rheumatic heart disease. Many such a person has lived to a ripe and vigorous old age. Just the other day I was told of a woman of 70 years who had brought up a large family of children under the handicap of a very modest income, insufficient to procure the help of servants. During the course of a recent illness she learned for the first time that she has a leaking heart. There is every reason to believe that her cardiac involvement dates back to an illness at the age of 14, the description of which strongly suggests acute rheumatic fever. Yet she had done a great deal of active work during the course of a long and busy lifetime. She admitted on thinking back through her life that there was never a time when she had not easily become short of breath. She had unconsciously formed the habit of sitting down whenever she felt shortness of breath or fatigue.

This is the secret of long life in the person with cardiac disease. It is important not to treat such a child as an invalid, once the active infection has subsided. He should be permitted to exercise freely but should always remember that he must not become unduly fatigued or short of breath. There is no reason why many such children should not attain a normal self-supporting adult life. Physical labor lays a special strain on the heart, and such a child should be consciously trained for a less arduous type of occupation.

To sum up, the rheumatic child must be given an adequate amount of rest while the infection is active. All possible foci of infection should be removed. He should be guarded in every way from exposure to infection of any sort because all infections not only subject the heart muscle to increased strain but may also reactivate latent rheumatic disease. Naturally all such children should live under a proper hygienic regimen in order to build up a maximum degree of resistance.

If the heart is permanently involved, parents must teach the child to live on a level of activity that will entail no strain on the heart muscle. They must help him choose a sedentary occupation. And they must never let him become discouraged, remembering that it is often the cracked dish that lasts the longest, just because it is handled with special care.

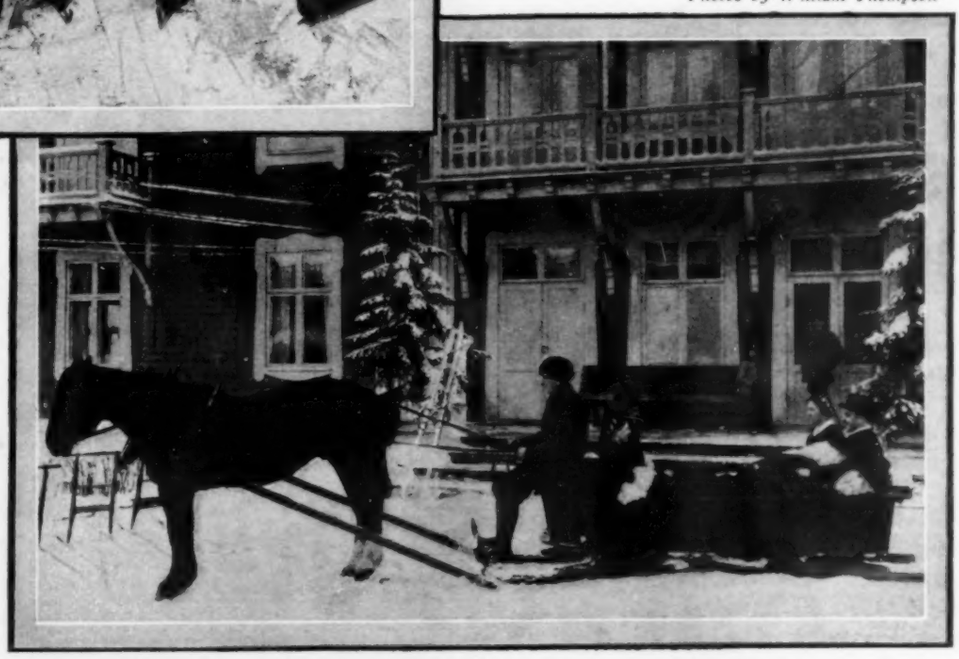
Where Winter Is Winter

NORWAY

HOLLAND

Enthusiasm for Sport in Northern Europeans Is Undaunted by Cold

Photos by William Thompson



SWEDEN

Hilltop Benny

By Dorothy Deming

MRS. DRUMMOND gazed anxiously out of the windows of her limousine. As far as she could see green hills and valleys undulated to the horizon. In all the green expanse there was no sign of human life, and even the rocky road ahead dipped into a wide sea of verdure at the next curve. She spoke to her chauffeur:

"Michael, I'm sure we are off the road. We must have taken the wrong turn at the foot of the mountain. I think you'd better turn back."

Michael obediently brought the big car to a purring halt.

"This must be the Bramble Mountain road to Coon Valley, Ma'm, and we must be nearly over the ridge now. I hate to take the car back over this bad road; Mr. Drummond wouldn't like it."

"I know—well—" Mrs. Drummond hesitated. It was provoking to lose the way on a deserted road like this one. She had supposed she knew all the roads in the county. She looked ahead at the wall of trees.

"Michael, I believe I see a chimney there on the right. Drive on a little farther. Maybe we can ask our way to Coon Valley."

They drove on. Sure enough, around the bend in the road was a house set back on a slight rise of ground. It was a forlorn looking place, gray, unpainted, standing in a tangle of vines and overgrown grass.

"Nobody lives here, I guess," Michael barely slackened speed.

"Oh, but the doorway! A beautiful old doorway. I want to get out and see it. It is really old. If any one lives here, I'll ask our way. It will give me an excuse to see the house."

Michael grinned. He was well acquainted with Mrs. Drummond's enthusiasm for old houses. He helped her out and then settled back comfortably in his seat, watching her thread her way up the hill through the berry vines, which clutched ruinously at her silk stockings.

As she drew near the house Mrs. Drummond was inclined to think Michael was right; surely no one lived in this tumble-down shell, with its windows blinded by dust and cobwebs, its doorstep rotting. The fanlight over the door was still lovely, like one redeeming feature in an old dissipated face, and Mrs. Drummond turned from it reluctantly to find her way to the rear entrance of the house. She was following a dim path, when suddenly she came upon a low bush on which hung a ragged, limp dish towel, unmistakably wet. People must live here after all, she thought, and though fear was unknown to her, something in the loneliness, the utter silence of the enfolding hills, the infinite stretch of the sky above, made her pause and wish she had brought Michael with her.

A slight sound within the house reassured her, however, and sent her to the back door, expecting to see an old man or woman emerge to meet

The child was naked and as tan as an Indian.

Not waiting for an answer, Mrs. Drummond followed Michael, who was carrying Benny on his shoulders down the hill.

her, for the place suggested age. Instead, on the floor of what seemed to be a kitchen, she saw a child, a small misshaped boy, sitting cross-legged. He had abundant curly brown hair and large brown eyes, but the most astonishing aspect of the child to Mrs. Drummond was the fact that he was completely naked and as tanned as an Indian.

"How do you do?" she began a little uncertainly, and then realizing that the boy was scarcely more than 4 years old, she added informally, "Is your mother in, Sonny?"

The boy answered something, a confused sentence of which Mrs. Drummond could not distinguish a word.

"If your mother isn't, maybe Daddy is?"

Again the throaty, liquid sounds came from the child, all run together without forming words. He must be dumb, she thought, then gasped in surprise and horror, for the boy, braced on his hands, lifted his body and legs off the floor and swung over to a side door, his legs remaining flexed in the same cross-legged position, his arms and hands serving in their places.

"Dear child!" Mrs. Drummond hurried to him, "let me help you to stand. Here, I will lift you up—so—now stretch down your legs." She grasped his firm brown body under the arms and lifted him to a standing height, but nothing happened. The withered, useless limbs stayed flexed, quite clear of the floor. The boy shook his head at her and smiled, his brown eyes dancing at her surprise. Mrs. Drummond felt bruised with pity, the smile was so radiant, so genuinely amused at her futile effort. Very gently she let him down to the floor and he continued to the door in his own peculiar swinging hand-walk.

The child rapped on the door, and at the same time shouted something that might have been either "Popper" or "Mommer." A shuffling sound answered him and in a moment the door opened and the thinnest man Mrs. Drummond had ever seen stood there peering at her with bloodshot eyes.

"What d'yer want?" he demanded ungraciously.

"I came to ask about the road to Coon Valley, but I'm so distressed about this little boy. Has he always been a cripple?"

"Naw, only 'bout three years; he's 5 now. He's dumb too, ever since he was born. Coon

Valley's three miles in that direction. Is that all yer want ter know?"

"Why, yes, I think it is—I wish I could do something for your little boy. What's his name?"

"Benny Adams. His ma died a year ago—consumption. I got it now, and I'll die soon. The boy's all right though." A faint spark of interest kindled in his eyes. "I heard tell of puttin' kids that might get T. B. out in the sun, naked. So I put Benny out. He won't get it; he's all right."

"I'm so glad! But you must see a doctor yourself, Mr. Adams. Couldn't I—" Mrs. Drummond was fumbling in the pocket of her sport suit for her change purse.

Mrs. Drummond Is Dismissed

"Naw! Yer cannot. I won't see a doctor; waste o' money. Good day!" And he suddenly stepped back into the room from which he had come and slammed the door. Mrs. Drummond flushed with anger. "Rude beast!" she whispered, then turned guiltily to see if Benny had heard. He was nowhere in sight, and she seized the chance to look around the room.

A huge cooking range occupied one end of the kitchen, there were a few broken chairs, a table, and in one corner a pile of quilts made up roughly into a bed. It made her think of a bed for a dog. Under the table was a stack of empty tin cans with flies buzzing over them. Mrs. Drummond shuddered. No wonder they had sickness here! She went hastily out into the warm, clear sunlight.

Benny was waiting for her, squatting in the grass and holding out a scarlet head of fragrant sweet william.

"For me? Benny, how wonderful! It's lovely! Where did you pick it?"

For answer Benny hitched over to the corner of the house and pointed. There, down by the sunny side of the barn and sheltered by it, was a bed of brilliant flowers—scarlet sweet william, phlox, larkspur and blue cornflowers. Benny smiled his radiant smile up into Mrs. Drummond's eyes.

"Lovely!" Mrs. Drummond repeated; and then, with sudden insight, "your mother's?"

Benny nodded. Mrs. Drummond fished again in her pocket and this time extracted a dollar bill. "For you, Benny. Keep it safe!"

A step interrupted her. She sprang up from Benny's side, fearful lest Mr. Adams had come to continue his rudeness, but it was only Michael, who, growing worried over her absence, had come to find her. He couldn't stop staring at Benny. "Poor fellar," he kept repeating, "poor little fellar." And Benny, who heard him perfectly, grinned at his pity.

"Could we take him for a little ride in the car, Mrs. Drummond? I don't guess he's been much in autos; let alone Packards."

Mrs. Drummond was delighted with the idea. She ran to the kitchen and called loudly:

"Mr. Adams, we're taking Benny for a short ride in my car; he won't be gone more than fifteen minutes." And not waiting for an answer she followed Michael, who was carrying Benny on his shoulders down the hill.

Only those who have ridden in automobiles but once or twice in their lives and then in small rattling cars can understand Benny's thrill, as he perched beside Michael, his naked tan body resting against the velvety cushions, the powerful car moving under him, jerkily to be sure, for the road was rutted, but without effort. His eyes were starry and he continually turned to smile back at Mrs. Drummond. The ride was all too short for him, and he went up the hill in Michael's arms, waving to Mrs. Drummond, while she called out promises to see him again very soon.

When Michael returned to the car he seemed to have contracted a heavy cold, for he was blowing his nose a great deal and swallowing heavily. Not until the car came to the foot of the long hill did he manage to say gruffly:

"The little fellar tried to give me the money you gave him." Then blew his nose again. Mrs. Drummond made no attempt to reply. Her thoughts were turning the problem over and over: what could be done, who could do it, and just what was needed most there on that hilltop. She felt up against a blank wall. Heretofore, in her world, money had always smoothed out difficulties, paid rent, doctor's bills, bought clothes and cleaned houses. But it was of no use in this case; it had been refused flatly. And suggestions were not wanted. Yet when she remembered Benny's sunny smile, and the glow in his eyes, she pressed the scarlet sweet william at her breast and vowed that she would see that Benny had his chance in the world.

Mr. Drummond Offers Funds

Mr. Drummond, to whom she poured out the story that evening, was as much interested and as baffled as his wife. The loss of a tiny curly-haired boy of their own years before made the plight of the crippled boy peculiarly appealing. Mr. Drummond simply couldn't see why money would not help.

"Tell you what, Jean," he announced after some thought. "I'm playing golf with a crowd tomorrow. I'll tell them about Benny and get their advice and checks too, if they want to offer 'em! Probably the boy could be taken to the city to see a specialist and the father be sent to a tuberculosis sanatorium." He spoke in the tone he used when settling a piece of business in his office.

"But, my dear, he won't go and he won't let the boy go. If you had been there with me today and heard him talk and had seen the way he ignored my suggestions and interest! He's too

proud or obstinate or something—in this case money won't help a bit."

The following afternoon Mrs. Drummond gave a bridge party, and it seemed to her an ideal opportunity to tell Benny's story and to ask advice of her twenty-three guests, all summer residents like herself. As refreshments were served she told of her adventure to a shocked and attentive audience. Like Mr. Drummond the guests thought in terms of money and one or two even reached for their handbags. It took quite a time to convince them that cash would not solve Benny's problem. Finally, one vivacious lady cried:

"I know! We'll kidnap Benny! Wrap him in a blanket and drive away with him to the city. I know a splendid orthopedic man there, and if he thinks best we can arrange for an operation or treatment, whatever he thinks is needed."

Every one laughed except Mrs. Drummond. Even while she recognized the suggestion as a joke, she had a sudden vision of Mr. Adams—lean, flushed, coughing—left alone in that miserable room to face death, the only human being in that vast circle of brooding hills. She shivered.

Just then, a little maid, who was a village girl hired to help out for the afternoon, touched Mrs. Drummond's arm and said quietly:

"Excuse me, Ma'm, I heard your story, and maybe you'd ought to call the county public health nurse, Miss Moore. She's real kind, she'd know what to do, and her office is in town here."

"The county public health nurse? I never knew there was such a person!" Mrs. Drummond turned to her guests: "My maid suggests the county public health nurse. Does any one know her?"

"Oh, I've seen her car outside the town hall. She wears a blue uniform, I think. She might be the very person to help," one of the women volunteered.

"Then I'm going to call her this very minute! Miss Moore, you say? I hope I can catch her, but it's after 5 now." Mrs. Drummond hurried to the telephone.

She had a vision of Mr. Adams—lean, flushed, coughing—left alone in that miserable room.

Miss Moore was still in her office and she answered at once: "Miss Moore, county nurse, speaking."

"Miss Moore, this is Mrs. Drummond of Drummond Hill. Perhaps you don't know me, but I am going to ask a favor of you."

"Yes, indeed, Mrs. Drummond. You live in that lovely white house at the top of the hill and you own two fluffy white collies!"

"You're right; only the collies own me most of the time. Yesterday, Miss Moore, while I was driving over the hills about twenty miles from here, near Coon Valley, I had to stop to ask my way at a dilapidated old house. There was a poor crippled boy there, and I want to help him. I thought you might be able to suggest some way to do so."

"You must be referring to Benny Adams on Bramble Mountain. Was his father cross, and a little drunk?"

"That's the family! I'm glad you know them."

"I know the Adams family very well. Theirs is a long story. How did you want to help them, Mrs. Drummond?"

"That's just the problem! I wonder—Miss Moore, could you possibly come to my home right away? You see I'm giving a bridge party and all the ladies are still here. I've told them about Benny, and we are all ready to do whatever you think best for him. Won't you come?"

Would she come! Miss Moore almost fell from her chair! What a chance—a group of wealthy summer residents interested in Benny! Perhaps she could tell of blind Mrs. Stevens down by the pond, of Grafton School at which running water was needed so desperately, of all the hundred problems of a county public health nurse trying to be both nurse and social worker in thirty square miles of mountainous country with meager resources.

"I'll be right out, Mrs. Drummond," she promised eagerly, "my car is outside. Thank you."

Within ten minutes Miss Moore was being introduced to Mrs. Drummond's guests and was hearing the story of yesterday's drive through the hills and the finding of Benny.

"Now you tell us what we can do to help, Miss Moore. Tell us about Benny."

"The Adams family came to that hilltop two years ago, Mrs. Drummond. Hilltop Benny, as we call him, was much the same as you saw him yesterday, only white and thin. His deformity is probably due to the wrong diet; he gets almost no fresh vegetables and no fresh fruit after the apple season. His speech defect is due to a cleft palate, which can be repaired to a certain extent at least. He has been once to see our doctor at the baby welfare clinic.

"Mrs. Adams was very ill indeed when the family came to the mountain, yet she made the home attractive. It was spotlessly clean then, and she had a flower garden. Mr. Adams devoted himself to her and the house. It doesn't seem possible that it can be the same place now! When his wife died, Mr. Adams went all to pieces. For days he did not come out of his room, and he began to drink. A neighbor kept Benny for a week or two in Coon Valley, and then Mr. Adams insisted on having him with him.

"We tried putting Mr. Adams in a sanatorium last fall, but the doctors refused to keep him, for he was so careless in his habits that he was a menace to the doctors and nurses. Curiously enough, however, he is extremely careful with his own things at home. He never lets Benny into his room, he boils everything he uses and keeps his clothes separate. I really think Benny is fairly safe from infection, thanks to his outdoor life."

"But why don't you take Benny away and have his diet corrected and his palate operated on?"

"I'd love to, Mrs. Drummond," Miss Moore smiled a little sadly, "but you see it is always necessary to secure a parent's consent for operations, and Mr. Adams won't give it. Furthermore, we know he has very little longer to live and it seems a bit cruel to take Benny away. Mr. Adams has promised to go to the county hospital as soon as he is too weak to get around, and then Benny will board here in town, have the necessary work done here or in the city, and then go to his aunt's in Chicago—his mother's sister, who will not help them so long as Mr. Adams is alive."

Women Find Way to Help Benny

Mrs. Drummond drew a long breath of relief. "Well," she said, "you have it all planned beautifully. I only wish there were some way we could help."

"Oh, there is! Benny will need money for clothes to go to the city and railroad fare to Chicago. I've been at my wit's end trying to figure where that money would come from. I'm sure Mr. Adams is drinking up his small savings, so we can't count on anything from him. May I count on you and your guests for, well, at least $200? Benny will need a complete outfit, you know, for he cannot travel in his coat of tan."

There was a chorus of acquiescence, pocketbooks opened, and almost before Miss Moore knew what was happening she had more than $200 in cash and checks in her lap.

"You are wonderful!" she thanked them, a catch in her voice. "If only other counties had summer resorts, what a healthy country our United States would be!"

"What do you mean?" "What's the connection?" Voices assailed her from all sides. Miss Moore became serious:

"Ladies, I don't believe you realize how lucky we are to have a health officer, a sanitary inspector and a nurse, or even a poor apology for one, in this county. There are still a thousand counties in the United States without public health nurses. There are hundreds that have no hospitals for county cases; in some there is not even a doctor. There is a county in the West larger than Connecticut and Rhode Island combined, in which there is but one doctor to serve a scattered population of about 4,000 souls. Can you picture it—you who have always been within a few minutes' ride of doctors, nurses, hospitals and drug stores? Can you imagine the plight of those mothers in childbirth? Can you vision the anguished waiting for the doctor, delayed by bad roads, in case of critical illness or a bad accident? Do you wonder that with your readily proffered money I think of the waste places and long to share your generosity with them?

"Back Yard" Communities Need Aid

"Why, right here in our state there is a little inaccessible township in the next county, in our back yard, as it were. The county is too poor to support a nurse—I wonder—since Benny is provided for in the future—if you wouldn't like to form a committee here and now and be responsible for sending a public health nurse up there next summer? She can't get there in winter! But oh, the people need her so! I'll gladly help you plan; would you think of it? As a sort of honor to little Benny?"

Miss Moore stopped abruptly, trembling at her own daring. Had she asked these wealthy women more than they were willing to undertake? It was almost always necessary to start such work on private funds before the county saw the need of drawing on public monies. If such people as Mrs. Drummond and her friends did not help, who would care for the Bennies and Mr. Adamses in these mountains? But Mrs. Drummond was speaking:

"I am proud, my dear, to be the first to contribute toward a nurse for our 'back yard' county. Tonight, ladies, after you have all had time to think it over and consult your lesser halves, I'll telephone you for your contributions. I, for one, am feeling a real civic urge to see

nurses like Miss Moore placed in every county in our state, and I'm going back to the city to plead the cause of our country sisters. In the future when I drive over these rolling stretches of green hills I shall take comfort in the thought that a nurse is riding over the back roads bringing friendliness to the people here."

The group broke up. Mrs. Drummond thanked Miss Moore again. The nurse climbed rather wearily into her car. It had been a long day for her, but she was elated over the interest the summer colonists had shown. A nurse for the "back yard" at last! She knew the conditions over there—old Mrs. Coombs, who wouldn't leave her shack and go to the county farm because her husband's grave was in the back pasture; little Alice Dawes, who was trying to be mother to a household of ten; and Jimmy with only one leg, who needed constant cheering and an artificial leg when he had stopped growing!

Mr. Drummond listened with deep interest to his wife's description of Miss Moore's plans for Benny. He was astonished to realize how little he knew of the conditions of the countryside to which he came every summer. He was a man of quick and sure decisions. As his wife finished her story, he said:

"Splendid, I'll back you as far as you think it wise to help in getting a nurse started in our 'back yard,' though I think eventually it is the responsibility of the public officials. In the meantime, I am going to ask Miss Moore's permission to send Benny a crate of oranges and—what's the stuff every one's talking about?—cod liver oil! And I shall arrange with our grocer to send fresh vegetables to them until Mr. Adams goes to the hospital. They can be sent by parcel post. Then I want you to sit down and write out Benny's story, just as you have told it to me, and we'll get it published for others to read. I shouldn't be surprised if a lot of summer people had neglected 'back yards' that need their help much more than our city neighbors do."

Mrs. Drummond was delighted with his plans, and she even made herself sit down and write Benny's story. This is it.

The Mind in the Breaking

THE typhoid carrier and the smallpox patient are not more dangerous to the community than are the mentally disordered, says Dr. Haven Emerson in an article entitled "The Mind in the Breaking" in the *Survey Graphic*. There would be as much sense in sending a child sick with scarlet fever to a reformatory as in sending the delinquent school boy to jail.

A study of 4 year old children from average families in a New England industrial city showed that one third had already developed characteristic problems of behavior that were likely to become definite personal or family embarrassments.

One remedy for these behavior problems is to include in the public health program of the country a service for parents, Dr. Emerson thinks. A trained personnel would be able to note deviations from normal behavior in children and to advise parents to seek professional help before the condition gets beyond remedy.

To fit the child for immunity to the buffets of social intercourse is as important as to make him immune from disease, in Dr. Emerson's opinion. The child who fails to make a social adjustment is a menace to the community, especially since problems of delinquency are shown to be closely related to the behavioristic problems of children.

Doctoring the ailments of behavior is as important as doctoring disease. The physician may well concern himself as much with the cure of the temper tantrum of a child, which in itself is a serious behavior problem and a sign of maladjustment, as he does with the cure of rickets, says Dr. Emerson. If half the boys who get into trouble with the police have suffered from bad companionship that is as important a social fact demanding preventive community expenditures as that half of the babies who die of diarrhea and enteritis had unpasteurized milk.

Dr. Emerson estimates that out of our 120,000,000 population in this country, there are 4,500,000 children under school age with behavior problems so serious that they will lead to later disturbances if they are not dealt with.

The health officer, says Dr. Emerson, must begin to ask himself such questions as: Will the psychiatrist get to the mean, lazy ne'er-do-well before the policeman does? Will the bully, the fearful child and the miserable man meet a wise social worker before they are forced into an institution? Can we learn that good health often depends more upon a change of attitude toward our fellows than upon a change of food, residence, work or life partner?

It is hard to escape the opinion that, however successful we have been in gradually bettering our physical adjustment to our modern life of crowds, we have been at least static, if not actually laggard, in learning to adapt ourselves to the psychological hazards and hurdles of the social organization of our time, Dr. Emerson concludes.

The Vegetable Parade in Healthville

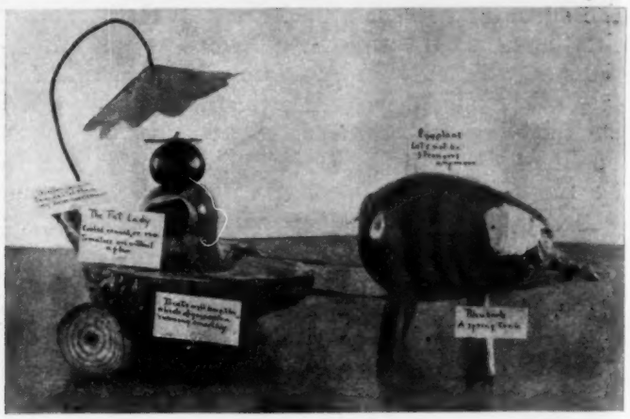
ROSTER OF PARADE

Solid Gold Band
Queen Lettuce
The Strong Family
The Coachman (Parsnip Man)
The Fat Lady
Aristocrats of the Cabbage Family
The Living Skeleton
Spring Tonic (Asparagus)
Summer Green (Swiss Chard)

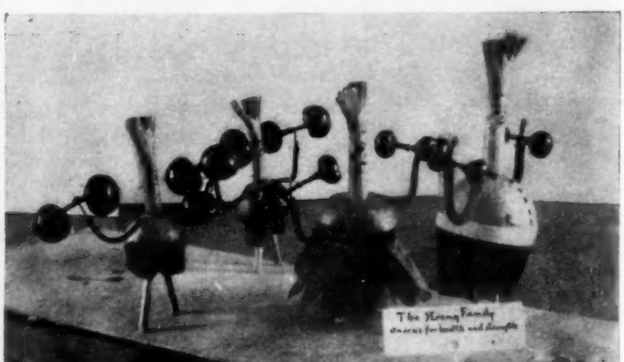
"OH, look at the string bean as the thin man, and the tomato as the fat lady!" "Well, doesn't that look just like an elephant!" "Wait 'till I take some notes." These and many other exclamations of joy and interest greet the vegetable parade whenever it is shown.

The Solid Gold Band, the pride of Healthville, made up of fourteen carrots leads the parade and attracts attention and admiration as it marches along with its scarlet capes and snow-white pants. Each player seems to be trying to outdo the others and make the most noise. The expressions on their faces are so ludicrous that the observer cannot help but smile.

Each carrot man is composed of parts of two carrots. The head is a carrot (the French forcing variety or a part of any small carrot) with half a small round pepper as a hat. The leader's hat is a long pepper. Black-headed pins are used for eyes and also to hold the hats in place, thus providing a decorative button. A few strokes of black paint indicate the eyebrows, ears and nose, and the peculiar expressions obtained with no particular skill are most gratifying and are enjoyable to both children and adults. No mouth is necessary, except on the leader and the drummer, as the instruments are

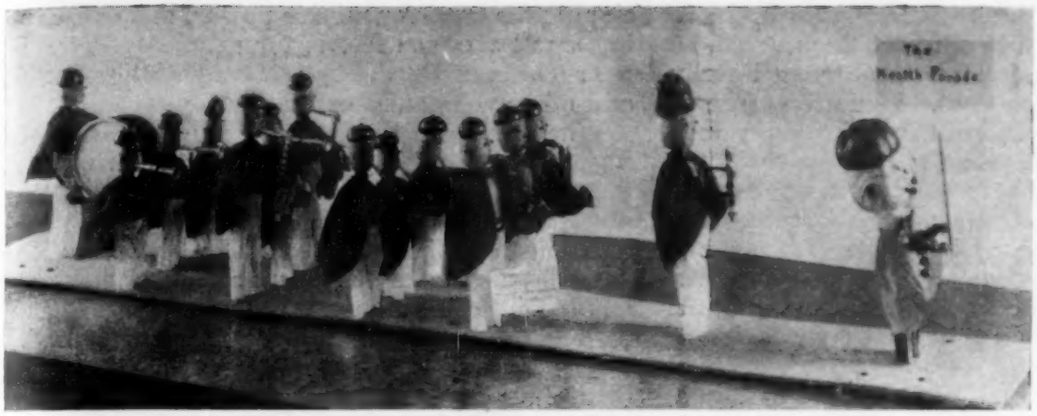


The Fat Lady



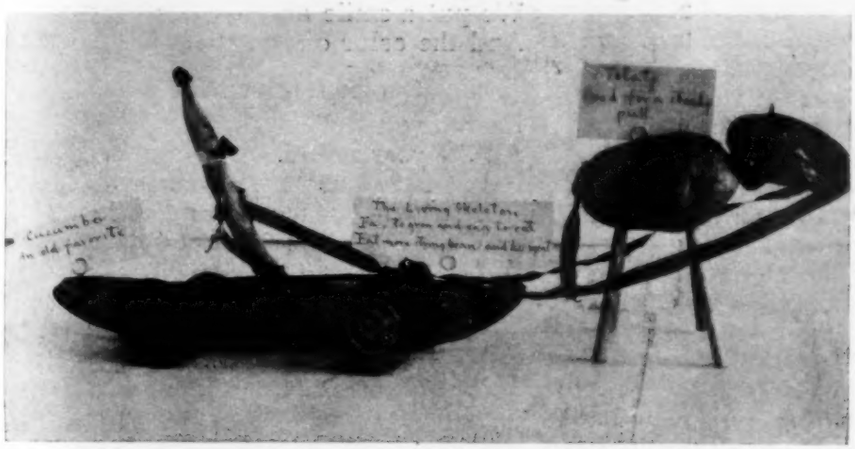
The Strong Family

Queen Lettuce



The Solid Gold Band, the pride of Healthville.

By PAUL W. DEMPSEY



The Living Skeleton in his cucumber float.

stuck directly into the carrot at the spot where the mouth should be; this holds them in place.

The body is made up of about 2½ inches of a medium sized carrot with about ½ inch of the top left on, providing a most admirable neck. A piece of covered telephone wire (no. 14) about 4 inches long is used for each arm. Cut off about ¾ inch of the covering on one end, bend it and insert it into the carrot body. Remove about ½ inch of the covering from the other end of the wire, bend the wire to look like a finger and place it on the instrument. The wire arms are bent in the middle to represent the elbow. Insert two meat skewers into the carrot body for legs.

Trousers are made from 2 inch strips of white crape paper folded and stitched on the sewing machine. They should be well creased so as to show a space between the legs or they will have the appearance of a skirt. The capes are made of pieces of red crape paper 4 by 7 inches. These are cut with the long side across the grain of the paper so they will gather nicely when stitched. The thread is drawn up to tie the cape around the carrot man's neck and the corners rounded off to give the appearance of a cape. The leader is holding a baton, and a small potato is on the drummer's hands, with which he beats the drum.

Small saxophones and trumpets are used for instruments. These can usually be obtained from stores handling favors. Wire covered with strips of red and white paper can be used if small instruments are unobtainable. A solid footing is necessary for this band; beaver board is admirably suited to the purpose. Use a ¼ inch bit to make the holes, and shave off the ends of the skewers slightly and force them firmly into the holes. The beaver board can be painted gray to represent cement, or the whole roadway can be sprinkled with sand.

Queen Lettuce in her chariot follows the band. A small head of lettuce is transplanted into a cheap tin cart filled with loam. This keeps the lettuce in good condition for several days. A crown is fashioned from gold or yellow paper. Pieces of red pepper are used for her nose, mouth and eyes, held in place by common pins. Her fiery steeds are two ears of corn with odd-shaped red peppers for heads. Black-headed pins are used for eyes (and to hold the peppers in place), and pieces of black paper are cut to represent ears and inserted in slits cut where the ears should be. Pieces of corn silk are used for tails. Four skewers are used for legs. The reins are narrow strips of green crape paper.

Next comes the Strong Family, composed of Pa, Ma, Dick and Dot. Onions of various sizes that are not fully ripened are used. Faces are painted on the long green necks of the onions, and part of the top is left on to represent hair. Arms of wire are used, and the wire "hands" are bent around dumb-bells of small red peppers. Pa's "weights" are the smallest and little Dick's the largest, making the family appear even more amusing. Pa wears green crape paper shorts, Ma a yellow dress and the kiddies sun suits. Buttons are painted on Pa's bosom. Skewers are used for legs. It is necessary for

the Strong Family to be held up securely so beaver board is used to support them.

The Parsnip Man follows the Strong Family in his summer squash float. Made the same as the carrot men but without legs, he looks very stiff and straight. A green coat is provided for him and he proudly drives a potato horse, with a pepper for a head, a string bean for a tail, and skewers for legs. I heard several persons say: "Haven't you seen a horse that looked just like that?" Slices of beets are used for wheels and heavy wires inserted through the squash serve as axles. Yellow crape paper reins are used by the Parsnip Man to drive his noble steed.

The Fat Lady is next in line with an old-fashioned sunshade to shelter her from the hot sun. Made of a large, a medium sized and a small tomato, she attracts considerable attention. With a beret on her head and fat string beans for arms, she looks healthy and plump. Because she is seated in her squash float, no legs are necessary. A small winter squash cut in halves with beet wheels is drawn by an eggplant elephant. The curly tip of a small string bean makes an excellent tail for the elephant, and small, undeveloped lima bean pods look well as ears. The elephant's legs are pieces of rhubarb attached to the eggplant by wires.

Next comes a small iron wagon drawn by another eggplant elephant containing a tiny head of cauliflower and broccoli. Then comes the Living Skeleton in his cucumber float, which is made by removing the seeds from half a large cucumber. Beet wheels are used with wire axles, as on the two squash floats. A long string bean (pole bean preferred) is used with small string beans for arms and legs. A curved wire is inserted the full length of the bean, leaving sufficient wire protruding to hold the bean firmly in place while the parade is going on. A face is painted near the top of the bean, and a bit of paper forms the hat. Another eggplant elephant is used for motive power, this one having small cabbage leaves for ears.

Trucks carrying celery, asparagus, swiss chard and other vegetables complete the parade.

When one starts, provided there is a good supply of material on hand, there is no end to the floats, freaks and odd figures that can be made up to join the vegetable parade. With a little ingenuity, cabbage, spinach, turnip, radish and other vegetables (fruits could well be included) can be shown off to advantage.

The vegetables should all be labeled. I made up the following to go on some of the participants in my parade:

CARROTS

We put a smile on your lips
And the color on your cheeks.

QUEEN LETTUCE

I serve you well
All the year round.

LIVING SKELETON

Easy to raise and easy to eat,
Eat more beans and less meat.

FAT LADY

Cooked, canned or raw,
Tomatoes are without a flaw.

ASPARAGUS

The best spring tonic
You can buy.

BEETS

We keep the wheels of
Your system moving smoothly.

STRONG FAMILY

Onions for health and strength.

These cards bring the message of the parade home and add considerable to its value.

We Need Pure Air

By
Bernard Behrend

The "fresh air bug" has the correct idea but the wrong method.

TO LIVE one must breathe, but to lead a healthy existence one must breathe air most beneficial to the human organism. The breathing of pure air means a diminution of the toll of human sickness and is essential in aiding us to arrive at the ripe age of three score and ten.

Today our medical journals and textbooks are studded with research, statistical and experimental, showing the effects of breathing good and bad air. Science is confronted by these problems in its attempt to alleviate or eliminate respiratory diseases common to mankind.

Just what do we mean by so-called good or bad air? Air at sea level, when analyzed, contains about 79 per cent nitrogen, 20 per cent oxygen, 0.04 per cent carbon dioxide and rarer gases in fractional amounts. These gases are spoken of as the normal constituents of the air and when it consists of them in approximately the foregoing percentages the air is termed good, or pure. At times the gaseous constituents are found in abnormal percentages as a result of altitude and overcrowded or ill-ventilated buildings. Often the atmosphere contains toxic gases or dusts thrown into the air from factories and automobiles. This air is bad, or impure. If impure air is breathed, the body cannot function correctly and the irregularities produced manifest themselves in a number of ways and make the person aware that something is wrong.

When air consisting of a large amount of oxygen is breathed by a healthy person no unusual results are noticed. In cases of heart failure or pneumonia, in which the oxygen supply to the blood is insufficient, the breathing of pure oxygen may improve the general circulation and relieve the condition of the patient. When air composed of too little oxygen is inspired a number of reactions are observed—quickened respiration and pulse rate, headache, difficulty in accomplishing normal tasks, mental cloudiness and finally fainting. Such symptoms may be experienced by mountain climbers and aviators at high altitudes, where the oxygen percentage is low. As a precaution, to prevent possible disaster, oxygen bags are carried.

High Altitudes Bring Barrel Chests

It is interesting to note that natives living in high altitudes adapt themselves to these elevations by developing emphysematous, or barrel, chests, which give an enlarged lung capacity. This adjustment permits the carriage of more air and hence more oxygen from the rarefied atmosphere to the lungs and the blood stream. Coincident with this change is an enormous increase in the number of red blood cells, reaching as high as ten million corpuscles per cubic millimeter as compared to about five million corpuscles per cubic millimeter for a normal person living at sea level. Since the red cells carry oxygen, their augmentation enables the body to receive more oxygen and helps compensate for the low oxygen density of the air.

When air containing large amounts of carbon dioxide is breathed, an increase in the rate of respiration is perceived. This fact is of therapeutic use, for in certain diseases when it is necessary to stimulate respiration a definite

mixture of carbon dioxide and air is administered. If too little carbon dioxide is present in the lungs, breathing may stop, as this constituent is essential for stimulation of the respiratory control center situated in the medulla. Even though respiration has been inhibited, the carbon dioxide given off from metabolic processes in the body circulates in the blood stream, activates the respiratory center and thereby renews respiration. After physical exercise carbon dioxide accumulates in the blood stream as a result of muscular activity and the respiratory rate is accelerated. By means of the quickened respiration, the excess carbon dioxide reaches the lungs and is speedily expired, thus keeping the amount of carbon dioxide in the body at a nearly constant level.

Nitrogen May Be Fatal to Divers

Nitrogen is an inert gas and a surplus or diminution of it in the air normally has no marked effect on a person. Nevertheless, it is of prime significance to men in submarines, deep sea divers and caisson workers, for under great atmospheric pressures nitrogen collects in the tissues of the body. As it is an inactive gas it is not utilized by the body cells. The gas can be removed only by gradually releasing the pressure, as is done in a decompression chamber, allowing the gas slowly to be expelled through the lungs. If the pressure is changed too abruptly nitrogen bubbles from the tissues, and a condition known as caisson disease, or divers' paralysis, results, which may mean paralysis or death to the diver.

To insure normal respiration there must be a perpetual balance of these gaseous elements. However, an abnormal respiration may not always be caused by impure air; it may be the warning approach of a disease. In diseases of the kidney, heart or lungs, respiration is usually affected and may be the first sign of illness noted by a person. Respiration also plays an important rôle in the measurement of heat production of the body, otherwise known as the basal metabolism determination, a valuable clinical diagnostic aid.

Air that many persons have breathed contains impure elements that are detrimental to health. In a crowded theater or office one may complain of headache and dizziness; these distress signals usually have as a basic cause the lack of oxygen in the air. Besides that discomfort, the temperature is high and the air dry, both factors conducive to the most frequently encountered of diseases, the common cold. Bacteria in the air, the transporters of air-borne diseases, are eager to take advantage of favorable conditions for their growth on the human host. The dry, warm air removes the moisture from the mucous membranes of the nose and throat, in this manner laying a foundation for irritability and infection.

Sudden changes in temperature, such as a person encounters upon emerging from overheated, ill-ventilated buildings, will eventually wear down his resistance to infection. This is one reason why diseases of the respiratory tract are prevalent in winter. Here can be found another cause of sinus trouble, a condition annoying and painful to many persons.

Of course, in the winter a building must be heated, but not from 15 to 20 F. above the desirable temperature of 68 F. When planning the heating of an office or any other room in which many persons are seated, it must be remembered that not only do the radiators emit heat but also the electric lights and the bodies of the workers. Most offices at this time of the year make no attempt to regulate ventilation. Possibly a window is unexpectedly thrown wide open to give a complete airing. The official position is often filled by the "fresh air bug," a person who has the correct idea about ventilation but the wrong method. Little does he realize that the chilling effect of the cold air blown directly on the warm, uncomfortable workers is fre-

One or two windows open at the top should supply the necessary change of moist air without creating a draft.

quently more harmful than the foul air he so hurriedly removes.

In every city, dust, smoke and toxic gases are problems with which to contend. Not only are they annoying, unsightly and disfiguring but they are dangerous, for smoke is irritating to the delicate membranous tissues, toxic gases are poisonous, while dust is a favorite carrier and spreader of bacteria. Dust can be the origin of many respiratory diseases such as diphtheria, influenza, pneumonia, whooping cough and tuberculosis. Hay-fever, while not induced by bacteria, could hardly exist if the pollen particles that irritate the mucous membranes of the nose were not carried as dust in the air. Elimination of dust is a problem confronting the medical world, because germ-laden dust starts infections. In addition, commercial houses suffer great losses on account of dust, for it not

Traffic officers and garage mechanics are daily exposed to the fumes of carbon monoxide.

only generates contamination of foodstuffs, but it leads to deterioration and destruction of merchandise.

Many workers are employed in mines, lumber mills and other places in which the air is dangerously laden with insoluble solid particles. In such employments the company should supply protective face masks that filter the air before it is breathed. Otherwise, these grains of dust lodge in the lungs of the worker, clogging the alveoli, and in time pulmonary disorders may develop, perhaps incapacitating the person for the rest of his life. It has been found that those employed in the manufacture of cement, where dust in the air is so thick it is impossible to see, do not as a rule tend to contract pulmonary diseases. Since the dust is composed principally of calcium and since that element is a normal constituent of the blood, it is absorbed into the blood stream from the lungs.

Air Conditioning in Public Buildings

Persons working in factories in which poisonous organic or inorganic gases are used or manufactured do so at a great risk, unless stringent precautionary measures are rigidly enforced. Some of these gases will literally eat away the sensitive lung tissue. The public is continually being cautioned, and the admonition is not unwarranted, of the hazardous consequences of inhaling one gas, carbon monoxide. Traffic officers in constricted areas and garage mechanics are daily exposed to this menace. Carelessness is the cause of carbon monoxide poisoning; seldom does the stricken person recover.

Within the past few years air conditioning, cooling and dust filtration have been strongly advocated. Machinery for those purposes is now found in modern offices, stores, theaters, schools, banks and a few homes. These systems, when suitably adjusted, keep the atmospheric temperature and humidity constant by supplying purified air at regular intervals. Not only is it practical in the winter but also in the summer season, when a temperature below that of the outside is steadily maintained.

Foul air can create a definite toxic influence on the nerve centers, deadening their action. Obviously in those institutions in which mental work must be accomplished, impure air is not instrumental in obtaining good results. It may be the reason for a child's backwardness at school. The establishments that are having their buildings equipped with this machinery are not only considering the ultimate result of more efficient work but the health of the employees or students. Will not the cost of installation and upkeep be worth the time lost because of illness contracted while working under adverse conditions?

If all the theaters and motion picture houses wish to encourage good attendance and make their audiences comfortable, they will be compelled to install this ventilating machinery. The public will in time become pure air minded and will frequent only places providing fresh air.

Until air conditioning machinery is within economic reach of the majority of homes, essential health rules should be observed. Dust control is at present difficult but at least an effort can be made to procure fresh air. When several persons are seated in a room it does not take long for the air to reach a percentage of 0.1 carbon dioxide. This may seem small, still it is sufficient to give rise to headaches and dizziness.

A room is never to be treated as a hermetically sealed structure. One or two windows opened a little from the top should supply the necessary change of moist air without creating a draft and chilling the occupants. Rooms filled with tobacco smoke should be ventilated in the same manner. Smoke has a drying effect and sets up an irritation in the nose and throat, causing sneezing and coughing. The medieval custom of sleeping with windows closed still exists in some homes and communities. It is only a matter of time and education until such insanitary practices are abandoned.

The breathing of pure air will eventually become an issue as important as the drinking of pure water. In the confines of work or study, in manufacturing plants, in amusement places, in homes, apartment houses and hospitals pure air will hold sway.

But a word of advice: In this life of artificial sunlight, air conditioning, reducing and muscle tone machines, the stimulus for outdoor life may be lost. Nature did not plan that the human body should be machine run. Exercise in the open air stimulates heart action, respiration and excretory functions and revives muscle actions. Do not depend solely on machines for health building or health saving; use your own body machine to the best advantage. Surely with proper care and consideration it performs far longer and more efficiently than any machine constructed by human ingenuity.

The Private Duty Nurse

FIFTY-FOUR per cent of active graduate nurses are in the private duty field caring for patients in homes or are employed as special nurses in hospitals, reports the Committee on Grading of Nursing Schools after making a survey of ten states including 24,389 nurses.

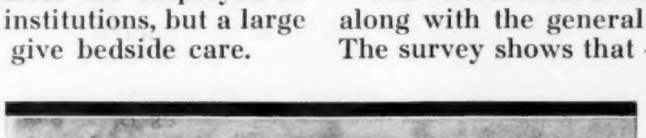
The active registered nurses in this country number more than 210,000. Twenty-three per cent of the registered nurses are employed in supervisory capacities in institutions, but a large percentage of these also give bedside care.

Almost one half of the private duty nurses are living in cities of 500,000 or more population, owing to the fact that there is a much greater demand for registered nurses in the urban districts, the committee reports. The others are grouped: 16 per cent in cities of 100,000; 17 per cent in cities of 25,000; 10 per cent in cities of 10,000 and 11 per cent in cities under 10,000.

The study shows that more than one half of the nurses are of American parentage; 56 per cent have fathers who were born in the United States; 12 per cent have fathers born in other parts of America; 16 per cent in the British Isles; 6 per cent in Germany; 1 per cent in France; 6 per cent in northwestern Europe and 1 per cent in central Europe.

A majority of the nurses have come from homes in which the fathers are either farmers or are engaged in manufacturing. Nine per cent have fathers who are engaged in professions, and 3 per cent have fathers in public service.

The educational standard for nurses is rising along with the general standard for education. The survey shows that 42 per cent have finished high school; 20 per cent have finished the first year of high school while 10 per cent have had one year in college.

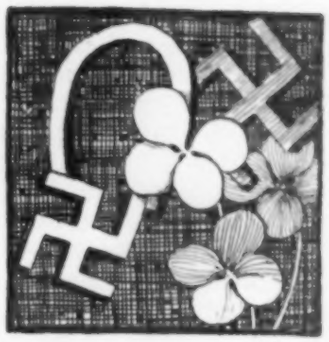


H. Armstrong Roberts

The unemployment problem is invading the nursing profession as well as all others. The typical nurse on private duty works for pay but seven months out of the year; she gives one month of free service and is on call duty for fully four months.

Regardless of irregular employment and low incomes, questionnaires to nurses show that they really love their work. It's a grand feeling, writes one, to see that steady climb to health which only the private duty nurse can glory in.

GOOD HEALTH IS Not a Matter of Luck



GOOD health, the best of all luck, is not a matter of chance, but is the result of proper living and working habits and attention to health matters. Good luck omens, since the dawn of time, have been directed toward the health of mankind. The sneeze omen was one of the first good luck omens, and one that has spread practically all over the civilized and uncivilized world. The expressions, "Your health!" and "God bless you!" which are still sometimes heard when one sneezes, have come down through the years from the remote days when the sneeze was considered an omen of bad luck unless it was followed by some such exclamation.

The old Egyptians and Babylonians believed in the good and bad luck of the sneeze omen, and Aristotle said there was "a good luck of sneezing." Plutarch and Socrates both knew of the luck omens connected with the sneeze. Sneeze omens persisted down to the late Roman and medieval times, and even the church was not free from sneezes, as St. Augustine mentioned the omen in his writings.

Today the sneeze omen is found in many widely separated countries and among different races almost all over the earth's surface. Many stolid Germans, canny Scots, ancestor-worshiping Chinese, energetic Japs, Hindus, the North American Indian, African Negroes and South Sea Islanders earnestly believe in it. There must have been something to it, after all, or perhaps it just meant that the little cold germs were in remote times as well as today pretty widely distributed throughout the earth.

Luck or some miracle that is equivalent to luck is often given as the cause of the return of health to many persons that were considered prospects for the undertaker. But lucky though it is for them and those who love them, regained health is never the result of pure luck.

Says Sudie E. Pyatt

Luck in curing tuberculosis, for example, is the result of the proper care and treatment of the patient and the patient's cooperation with the forces that are working to cure him. In tuberculosis sanatoriums, sometimes luck seems to play its most inexplicable pranks. Patients in advanced stages of the disease live to make unexpected comebacks, while patients in the first stages of the disease, the supposedly curable stage, die in spite of all the doctors can do for them.

If we stop for a moment and inquire into the cure habits of the far advanced patients who come back and of those in the early stage who fail, we find that the former take no chances and pay strict attention to the doctor's orders, while the other patients, who do not feel very ill, take unwise chances and instead of growing better they grow worse.

The thoughtless person who sees a man or woman who has overcome a physical handicap exclaims: "What a lucky person!" Luck, as used in the terms of chance, has nothing to do with the person's overcoming the handicap and making a success of his life. Patience, pain, work and a slow but sure overcoming of the difficulties represent the way most people overcome handicaps. By the earnest marshaling of forces toward a particular goal, the handicapped can win success despite handicaps, call them lucky or unlucky, as you wish. Dr. Edward Livingston Trudeau, with a case of active tuberculosis, went to Saranac Lake to hunt, fish and die, and discovered the modern rest cure for tuberculosis.

Lucky parents are not lucky by chance but by real work and care in bringing up their children. A healthy, well mannered child is not a chance product, but the product of hard work, thinking and training on the part of his parents.

Persons who escape infectious diseases do so by a knowledge of the methods of the spread and control of infectious diseases. Some persons from childhood are lucky in the matter of escaping contagion, but their luck is not due to chance but to care and careful planning. By keeping the body in the best of physical condition at all times, by staying away from unnecessary exposure to infectious diseases, and by a simple knowledge of the symptoms of infectious diseases and their treatment

in the early stages, any one can be lucky in the matter of escaping them.

Good teeth are not due to chance, but to proper diet, a toothbrush, a good dentifrice, systematic cleanings, and a good dentist. Proper prenatal care, twice daily brushings, semiannual visits to the dentist, and other care and attention will give any man or woman a mouthful of teeth that make smiling a pleasure.

Colds can be prevented by proper care of the body, not by carrying a rabbit's left hind foot in the pocket. One person has a constant succession of colds, the other never has a cold and "does nothing to keep from having them." But if we check up on the living habits of the two, we find that one's habits are correct, those of the other are incorrect.

Children who escape diphtheria do so through the medium of toxin-antitoxin, not luck. One child dies because his parents were not well enough informed or were too careless to have toxin-antitoxin given him. The other child never has the disease, even though exposed to it. He was given toxin-antitoxin. The parents of the child who lives are lucky, those who lose their child unlucky, to their nonthinking friends.

One woman dies of cancer because she did not recognize the early symptoms of the disease. Another woman recovers because the disease was discovered in time; one woman was lucky, the other unlucky. The lucky woman knew some of the symptoms and treatment of the disease and, acting on her knowledge, was cured. The unlucky woman did not seek medical advice when she first discovered a lump in her breast, and she paid for her lack of knowledge with her life.

A young man becomes the victim of venereal disease because he failed to learn lessons of self-restraint and simple hygiene. His pal does not acquire the disease. There was no luck in the matter, for the first young man did not avoid possible infection and the second did.

Flies and an insanitary water closet are the cause of typhoid fever in one family. The control of flies and the use of a sanitary outhouse prevent the disease in another family. The family free from the disease is lucky not by chance but by design.

The control of smallpox hinges not on luck but on vaccination.

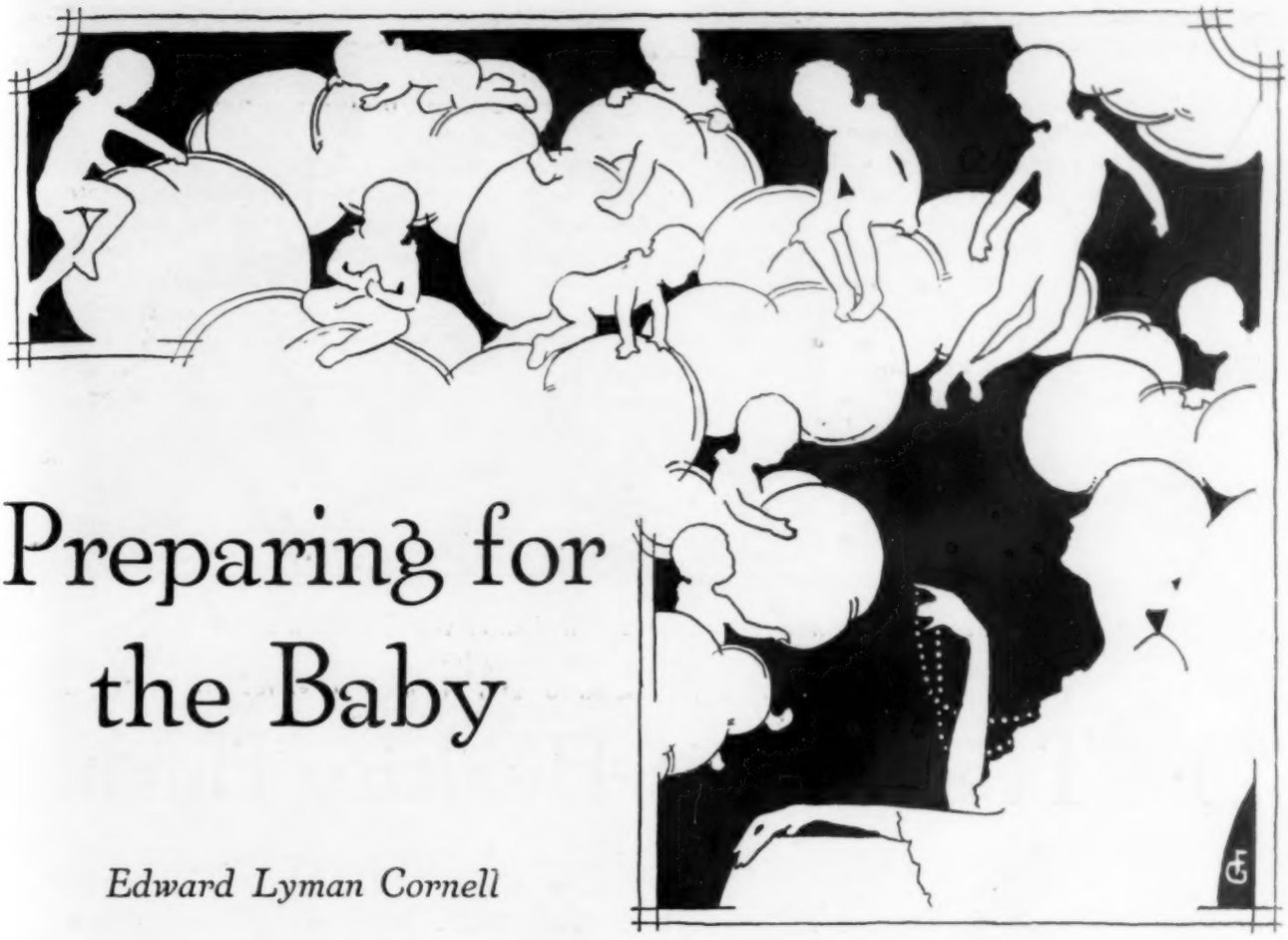
Chances for good health are all about us even when health seems almost impossible of recovery. But good health does not come to the man who says despondently that health is gone. Health comes to him who accepts the fact that he is ill and seeks recovery by the use of his own common sense, nature's aids, and the help of modern medical science. He needs to pin his faith on good food, fresh air, plenty of rest, exercise and a good physician.

It is asserted that some persons are luckier than others in avoiding accidents. A psychological test can now be made on industrial Jonahs, as persons who are particularly susceptible to accidents are called. The test is made on strips of perforated paper which pass like the paper roll of a player piano before the person being tested. One who is not likely to be an industrial Jonah will strike the little metal point given him for the test into each perforation as it passes before him. The industrial Jonah will miss a large part of them, because he lacks proper coordination of the muscles of eyes and hands. Those people who do succeed in punching the perforated holes have unusual ability to coordinate the muscles of their eyes and hands. This test seems to prove the theory that though luck to some extent does control our lives there are perfectly legitimate reasons for our luck or lack of luck.

"Luck cannot change birth," Horace said, but proper care and medical aid have often done wonders for children physically handicapped from birth.

Some people are luckier in making choices than others are, not because of chance but because of more accurate knowledge and judgment.

Between pluck and luck, pluck always wins, for a "pound of pluck is worth a ton of luck," in health as in other things.



Preparing for the Baby

Edward Lyman Cornell

AFTER the fourth month of pregnancy the prospective mother should devote considerable attention to personal hygiene. Unsightly stripes or breaks in the skin of the abdomen may frequently be avoided if the skin is massaged with olive oil or cocoa butter. Large sized packages of oil or cocoa butter should not be used since they become rancid.

The use of a form-fitting brassière with shoulder straps is advisable.

Take particular pains to keep the entire person scrupulously clean, using soap and water on a Turkish wash cloth to remove any secretion that may collect. A bath may be taken daily, the shower being preferable to the tub. A very hot bath is strictly prohibited. During the last month the shower or sponge bath should be taken since the tub bath frequently causes infection.

While the prospective mother is doing all of the things needful for her own well-being and comfort, she should also give thought to the needs of the child both prenatally and after it arrives. The preparation of the baby's clothing should be started early, so that everything may be in readiness for the new little visitor.

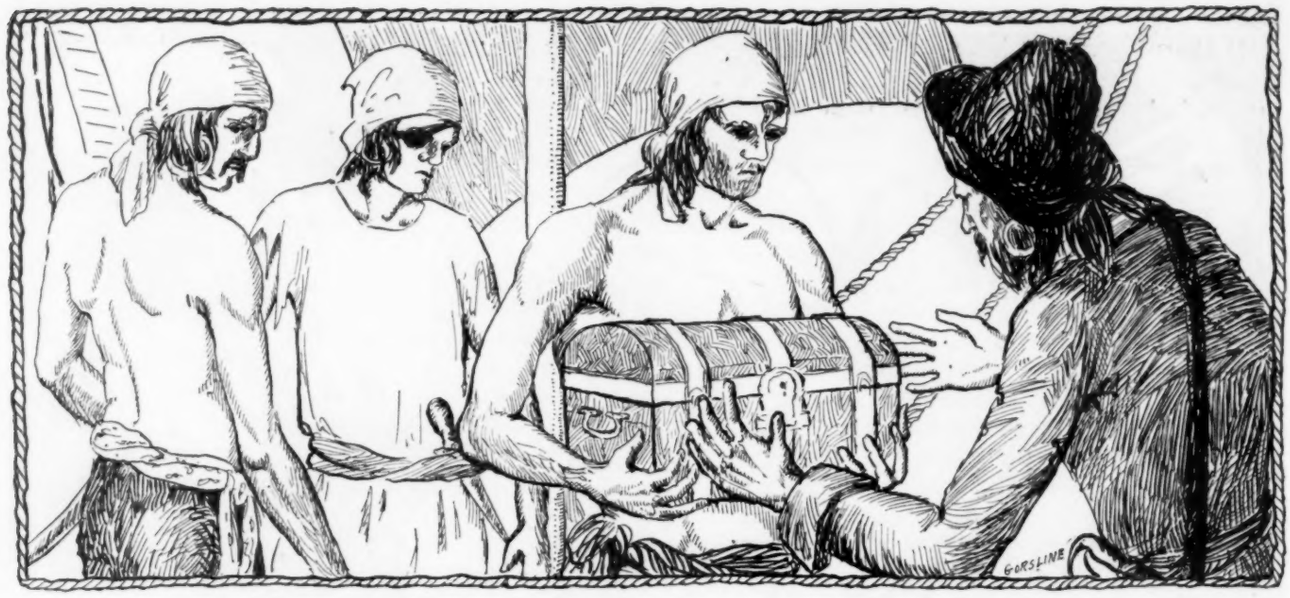
During the first four months of its life the baby needs few clothes. It outgrows the first clothes quickly, so do not secure a large wardrobe. Today, baby's clothes can be purchased ready made in a large variety of patterns and materials at reasonable cost. For waistbands secure a half yard of wool flannel, 18 inches wide. Divide it into four parts along the selvage edge and rip. This makes four bands. Do not overstitch the raw edge. These bands are used only during the healing period of the umbilicus. After six weeks it is not necessary to use a band of any kind, not even the knitted ones.

A summer baby should have cotton shirts; a winter baby heavier cotton, and in some cases wool mixture. Do not buy too heavy materials. Buy four shirts, either no. 2 or no. 3. Thereafter secure them as needed, as the baby outgrows sizes quickly.

A flannel petticoat on a cotton yoke which buttons at the shoulders is the most serviceable. Light flannel should be used for a summer baby. Have at least four of these.

A simple dress is best. It should be made of easily washed material and should hang from the shoulder. Have at least eight of these.

Silk or cotton stockings can be used in spring and summer; cashmere or wool mixture in winter. On very cold days booties may be used. Don't put too much on the baby's feet as they sweat easily. On warmer days the feet should be left bare and uncovered.



Among the plundered treasures was a chest all bound in gold.

The Treasure of Healthy Harbor

A Play Written and Produced by Seventh Grade Children under the Direction of ROSE KRUG

CAST OF CHARACTERS

CAPTAIN OF PIRATES	QUEEN OF GOOD FOODS
FIRST MATE	CARROTS
SECOND MATE	CABBAGES
CABIN BOY	LETTUCE
FIRST PIRATE	TOMATOES
SECOND PIRATE	POTATO
THIRD PIRATE	MILK
FOURTH PIRATE	HOT CEREAL
FIFTH PIRATE	GRAPEFRUIT
OTHER PIRATES	ORANGES
TOOTH BRUSH GIRLS	APPLES
QUEEN OF DIRT CHASERS	BANANA
SOAP AND WATER SPRITES	BREAD
OTHER SPRITES	BUTTER

Prologue

When pirates sailed the main in the stormy days of old,
They roamed the whole world o'er to seek for hidden gold;
A certain crew of pirates had gained great stores of wealth,
Though very rich in money, they were very poor in health;
One day as they were sailing o'er the ocean blue
An English ship they captured; over it their flag they flew.
Among the plundered treasures was a chest all bound in gold,
They carried it to the captain, these pirates strong and bold.

SCENE: Pirate Captain's cabin. Captain, Cabin Boy, First Mate and Second Mate are grouped around a table. The Captain is trying to open a box.

TIME: Evening after the capture of an English ship.

CAPTAIN *(mumbling and trying to open box):* Boy! Bring me a spike!

BOY *(scurries off stage):* Yes, sir!

FIRST MATE *(looking at the chest):* It must contain a great treasure, since it is so securely fastened.

SECOND MATE: This ship was a real prize!

BOY *(returns and hands an iron to the captain):* Here it is, sir. *(All gather around and watch with interest as the captain opens the box. When the box is opened he gazes in surprise and finally lifts out something.)*

ALL *(surprised):* Treasure! *(The Captain bends over a map and studies it for a few seconds.)*

CAPTAIN: This looks interesting. Call in the crew!

CABIN BOY *(runs off stage and can be heard calling):* All wanted in the Captain's cabin! *(The Pirates come in and stand about awkwardly. Some talk with the first and second mates and become rather excited.)*

CAPTAIN *(disgusted):* Only a map!

ALL: A map!

CAPTAIN *(spreads the map on the table, as the others gather around to watch):*

FIRST MATE: A treasure map!

CAPTAIN: Are all here?

FIRST MATE: Yes, sir! All except those who are not strong enough to get around.

CAPTAIN: I wish I knew how to keep my men strong and well so that all could fight!

SECOND MATE: Yes, sir. If we could, sir.

CAPTAIN: We have opened the chest that was a part of the plunder of the ship. It contains a map that may lead us to a treasure. Shall we follow it?

PIRATES *(waving arms and showing general excitement):* Yes! Yes!

CAPTAIN: If I only knew how to keep my men strong enough so that all would be able to fight.

Act II

SCENE: Island of Cleanliness. The Pirates are seen disembarking.

TIME: Two weeks later.

FIRST MATE *(looking at the map):* This is the first island, sir.

CAPTAIN: What are the directions?

FIRST MATE *(reading):* Walk five steps north, and whistle three times. *(Cabin Boy follows the directions. Two girls appear carrying between them a large tooth brush.)*

CAPTAIN: What is the name of this country? What is it that you are carrying?

FIRST GIRL: This is the Isle of Cleanliness.

SECOND GIRL: This is a tooth brush. It represents the brushes used by the people who like their teeth to look bright and feel clean; if you use this twice a day and let the dentist examine your teeth twice a year, your mouth will be kept in good condition.

FIRST PIRATE: I shouldn't know how to use a thing like that!

OTHER PIRATES: Neither should I! Nor I!

FIRST GIRL: I'll call the children of the Isle of Cleanliness! They can show you how. *(Girl whistles. Several small children run in, each carrying a tooth brush and a glass. They sing "This Is the Way We Wash Our Teeth.")*

CAPTAIN: That looks easy!

FIRST PIRATE: I believe I could do that too.

OTHER PIRATES: Let's give it a trial!

CAPTAIN: How do the children keep themselves so clean?

FIRST GIRL *(whistles, and a girl enters carrying a bath towel, a wash cloth and a bar of soap):* My helpers will show you how to keep clean. *(Soap and Water Sprites enter.)*

LEADER OF SPRITES: We are the fastest dirt chasers in Health Land.

SECOND SPRITE *(pushing forward):* You can't beat us!

OTHER SPRITES: And us!

QUEEN OF DIRT CHASERS: See how dirty the Pirates' faces and hands are! See which of you can do the best job! *(The Sprites run toward the pirates. They divide into pairs, each pair taking one pirate. One produces soap, the other a towel. The pirates start to back away and duck their heads.)*

QUEEN: Ready! Go! *(Each pair of sprites work on their pirate.)*

PIRATES: You're rubbing too hard! You're getting soap in my eyes! Stop! Ouch!

LEADER: We've finished!

OTHERS: We've finished!

FIRST PIRATE: My, I feel so queer!

SECOND PIRATE: I haven't felt so well in years!

CAPTAIN: My crew has surely improved in looks!

FIRST MATE: That was a short and easy change!

QUEEN OF DIRT CHASERS: Yes, a generous use of soap and water is a good stride toward health. *(Soap and Water Sprites take places on stage as they sing a song.)*

CAPTAIN: I'll see that my men clean their teeth and that they keep themselves clean with plenty of soap and water. Is this all that is necessary to be healthy?

QUEEN OF DIRT CHASERS: Oh no, at the Cape of Good Foods you will learn more rules that will lead you toward Healthy Harbor!

"The map may lead us to treasure. Shall we follow it?"

"See how dirty the pirate's face is. Let's improve his looks."

Act III

SCENE: Cape of Good Foods. Carrots, Cabbages, Lettuce, Tomatoes, Potato, Apples, Oranges, Banana, Grapefruit, Milk, Hot Cereal, Butter and Bread are grouped on the stage. Pirates are gazing at them in wonder.

TIME: A week later than Act II.

FIRST PIRATE: This is supposed to be the Cape of Good Foods, but I don't see any salt pork here!

SECOND PIRATE: They look like weeds, or flowers or almost anything to me.

FIRST MATE: These things may be good to eat!

SECOND MATE: They look good enough to eat, all right!

CAPTAIN: Yes, I think so too. Boy, bring me one of those. *(Points at largest Carrot. The boy goes to Carrot, and as he pulls on the top, Carrot rises to his feet. All foods stand.)*

LARGEST CARROT: Hark! here comes the Queen of Good Foods. *(Queen of Good Foods enters.)*

FOOD: Welcome, our queen!

QUEEN OF GOOD FOODS *(to Pirates):* You are welcome to the Cape of Good Foods!

CAPTAIN: If you are their queen, perhaps you can tell us what these things are good for.

QUEEN: They will tell you themselves!

CARROT: We are Carrots. We put iron in your blood and make you strong and well.

FIRST MATE: Maybe they would be good for some of the men who are sick!

CARROT: We make babies strong and can make men strong too.

SECOND MATE: How should carrots be prepared?

CARROT: We taste good with butter or cream, and we are very good raw!

FIRST PIRATE: Easy enough!

CABBAGE *(steps toward the pirates):* We Cabbages are also very good when eaten raw. We have minerals and vitamins that are not found in some other vegetables. Chop us up and use us as a salad. You'll be sure to like us! Sometimes we are made into sauerkraut. We're good then too!

SECOND PIRATE: I believe that would be good!

CABIN BOY *(pointing at Tomato):* What is that pretty red thing?

TOMATO: I am Tomato. *(Takes Lettuce by the hand.)* Lettuce and I make very good salads. We are best eaten raw. We give the body certain minerals and vitamins that are healthful.

FIRST PIRATE: You look pretty enough to eat!

TOMATO: If you'll try us you'll find that we taste even better than we look!

POTATO *(steps forward):* I'm not very beautiful but I furnish starch, and I'm an important item in any well balanced diet!

SECOND PIRATE: Why, sure! I've eaten some potatoes. They were good!

FIRST MATE *(pointing toward Milk):* What's that funny looking vegetable over there?

MILK *(indignantly):* I'm not a vegetable! I'm Milk. I bring energy, make strong bones, repair worn out tissues, and help build muscles! *(proudly).* You see I'm very important.

CAPTAIN: That ought to be good for our sick men! We'll take some of that right with us!

MILK: My companion and I make a very good meal.

CAPTAIN: Who is your companion?

MILK *(takes Hot Cereal by the hand):* Here he is. My friend Cereal.

CEREAL: I make a good breakfast for little children, big children, and I'm just as good for pirates. The persons who have me for breakfast are ready for a good day's work.

GRAPEFRUIT AND ORANGE *(step forward):* You'll need us to complete your breakfast.

CAPTAIN: Who are you?

GRAPEFRUIT AND ORANGE: We are two fruits that bring valuable health-giving material. If you pirates include us in your diet, you'll have no more scurvy and you'll feel much happier and stronger than before.

FIRST PIRATE *(pointing at Apple):* Oh! look there's a freak tomato.

APPLE *(stepping forward and stamping foot):* I'm not a freak tomato. I am Apple, and I want you to know that I'm a very important fruit. Apples not only furnish good food elements, but help keep your teeth clean. *(Shaking his finger at the pirate.)* Remember I'm not a freak tomato, but a juicy apple.

FIRST PIRATE *(surprised):* Whew! I'll remember about Apple from now on.

CABIN BOY *(pointing to Banana):* There's one fruit I know! That's Banana. Boy, he tastes good when he is ripe and speckled with brown.

QUEEN OF GOOD FOODS: Yes, and he is good for you, too.

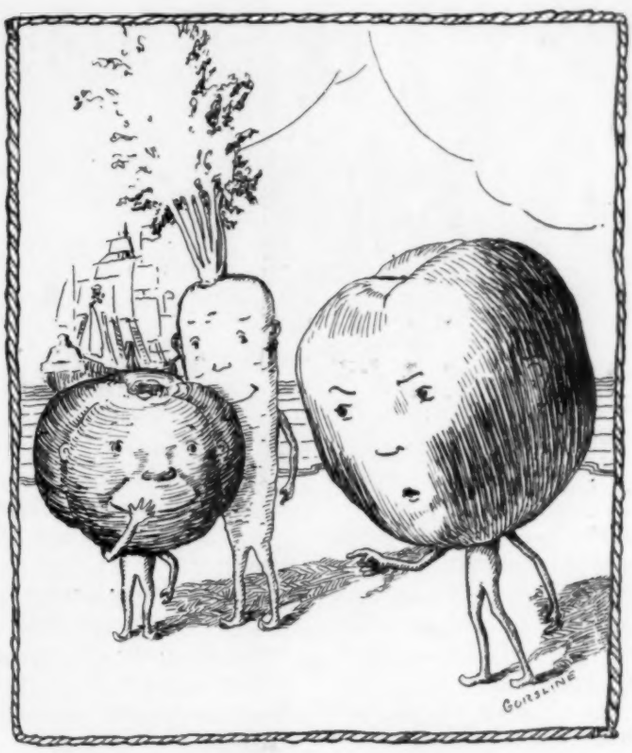
CAPTAIN: Have we seen all of the good foods now?

BREAD AND BUTTER *(stepping forward hand in hand):* You've almost forgotten us!

QUEEN: Yes, and they are one of the common foods. You all know Bread. You should become familiar with Butter. He is a fine food!

CAPTAIN: My crew and I are grateful for what you have taught us about foods. From now on I shall see that my men have plenty of fresh fruits and vegetables and nourishing foods to eat. There is one more island charted on the map, and we must go in search of it. We shall sail this very night.

ALL: Goodby! Goodby! Good luck!



"I'm not a freak tomato. I am Apple, a very important fruit."

Act IV

SCENE: Healthy Harbor. Pirates are grouped on the stage looking at the map. As the curtain goes up, the second mate starts pacing. Others count aloud: one, two, three, four.

TIME: Two days after Act. III.

FIRST MATE: That's the place to dig. *(Two pirates with shovels step toward a place in the curtain that represents a mound. They dig for a few minutes.)*

FIRST PIRATE: I've struck something hard.

ALL *(crowding around):* What is it? Hurry! What have you found?

SECOND PIRATE: Here's a handle! Give us a hand, mates.

ALL: Treasure Chest! *(Two pirates carry the chest onto the stage.)*

CAPTAIN: Stand back, we'll open this at once.

FIRST MATE: Yes, sir. Now that we are eating the correct foods and are following the rules that we learned on the Isle of Cleanliness, even those who were not well have become strong and healthy.

CAPTAIN: That's fine! I'm glad to hear that! Now let's see what's in the chest! *(Starts opening the chest. He acts as if he expects the chest to be hard to open, but it is not.)* My! This opens easily!

OTHERS *(crowding around):* What's in it? Let me see! I hope it is full of gold!

FIRST PIRATE *(pulling at a tomato):* Oh, here's what I like.

ALL: A tomato!

SECOND PIRATE: Look what I found!

ALL: Soap!

SECOND PIRATE: I'm glad I found this. Now I can have a bar of soap all my own.

CAPTAIN: Here's a box. *(Opens box.)* Good! A tooth brush for each one of you.

SECOND MATE *(pulls out a towel and a wash cloth; as he does so a banana falls out):* Aha! See what I've found!

CABIN BOY *(quickly picking up the banana):* And here is our old friend the banana again.

THIRD PIRATE *(pulls out apple and speaks to First Pirate):* Look, here's the apple that you thought was a tomato!

FIRST PIRATE: I'll never make that mistake again. I eat an apple every day now.

CABIN BOY *(looking into chest):* And here are all the other good foods that we met on the Cape of Good Foods! Here are grapefruit, orange, milk, lettuce, cabbage and the other health foods.

FIRST MATE *(looking into chest):* Yes, sir! Everything that we learned about. *(He takes out a book.)* And here's a book that gives all the health rules. It seems to tell about our fruit and vegetable friends. Drink plenty of water, it says. Exercise and fresh air and plenty of sleep are recommended.

CAPTAIN: This is the best treasure we have ever found.

CABIN BOY *(jumping to the center):* Three cheers for Health!

ALL: Rah! Health! Rah! Health! Rah, Rah, Rah, Health!

"Nice day for a party, isn't it?" said the voice in the grass at Alice's feet.

Alice in Slumberland

II. The Tea Party

By
Nellie G. Herriman

THE birds had gone to bed in their nests in the apple tree and the frogs had begun to sing in the fish pond. The sun had set long ago, but still Alice and the children from down the street played at hide-and-seek in the shadows of the orchard.

Nurse had called for Alice three times, but Alice pretended not to hear; and, once, when Nurse came to the orchard to look for her, Alice had climbed high in an apple tree and hidden until Nurse had gone back to the house.

She knew it was bedtime. The clock had struck 7:30 before she came out to play and it must be long after 8 o'clock by this time. She did not want to go to bed. Nurse said she would not grow to be strong, rosy cheeked and beautiful if she neglected her sleep, but Alice didn't care. Although she was supposed to be in bed by 8 o'clock, it must be said that often it was nearly 9 when Nurse was finally able to put out the light and say goodnight.

Other children went to their homes one by one as their mothers or nurses called. At last they had all left the orchard, so that Alice was alone in the shadows under the trees. She was not afraid to be alone, for Nurse had often told her there was nothing to fear in the dark. So she sat against the trunk of the biggest tree and watched the lights twinkle in the houses about her.

Nurse came to the door and called anxiously once or twice, but Alice only giggled behind her hand and sat very still. Soon Father left the house and went one way down the street and Nurse came out and went the other way. She knew they had gone to look for her. Mother stood at the window looking out into the dark. Alice knew she was being naughty, but it was cool and pleasant under the trees and she thought she would stay just a few moments longer.

"Nice day for the party, isn't it?" said the voice in the grass near her feet.

For some reason she was not at all surprised. "It is not day," she said. "It is evening, going on night."

"I beg your pardon, it is daytime," said the voice, and there was a rustling in the grass near the roots of the tree. A pair of long ears came into view, then two round eyes, a puckered little mouth with long whiskers at each side and no chin underneath, and last of all a soft gray body.

The Rabbit Appears

"Oh, you are the Rabbit," said Alice.

"Of course, and it is daytime."

Looking about her, Alice saw that it was daytime. The apple tree had disappeared, the houses with their twinkling lights were gone. The grass had changed to moss. A little brook ran gurgling where the fish pond had been. All about were many tall trees.

"Why, we are in a forest!" Alice exclaimed in surprise.

"Of course, stupid," answered the Rabbit.

Alice did not like to be called stupid, and had opened her mouth to tell him so, when a weary voice complained:

"You are so very heavy! Won't you please lean up a while?"

When she straightened up and looked behind her, Alice was surprised to see that she had been leaning against an odd-looking little man, with a big nose, queer brown eyes, and a pointed chin. Upon his head he wore an enormous hat, which he now removed and polished upon his coat sleeve.

"Once when you shifted, I thought you would smash it," he complained. Alice felt sorry, but didn't know what to say.

"Let's be on our way to the party," said the Rabbit, fastening his red vest more closely about him. He grasped Alice's right arm so tightly that it hurt. The Hatter (did you guess that it was he?) placed his big hat firmly on his long head and held her left arm so tightly that it hurt too. With her between them, they strolled through the forest. Although it looked as if they walked slowly, Alice had difficulty in keeping up with them and was forced to make her feet fly very fast.

Alice Admits Reading in Bed

"Let's not walk so fast," she gasped. "There's plenty of time."

"No, we are late now," objected the Rabbit.

"But I can't keep up with you," she cried. "You are walking too fast."

"Oh, no, we are walking very slowly," said the Hatter, and indeed it looked as if they were.

"You are weak," said the Rabbit. "I expect you read when you should be playing, and play when you should be sleeping."

"That is probably right," said the Hatter, "else how did she know about us?" He turned fiercely upon Alice, who was walking very fast

"You became acquainted with us in a book, now, didn't you?" asked the Hatter fiercely.

From the tall hat the Rabbit took a brown teapot, a plate of sandwiches and a handful of cookies.

all the time. "You became acquainted with us in a book, now, didn't you?"

"Yes," said poor Alice.

"You read about us after you had gone to bed, didn't you?"

Alice nodded her head; she was very ashamed.

"And your Nurse thought you were asleep, didn't she?"

"Yes," said poor Alice, "but how did you know all this?"

"You are very rude," said the Hatter, "you must never ask questions."

"You are hurting my arm," said Alice. "Won't you please let go?"

They Meet the Dormouse

"You are very rude," said the Rabbit. "Your arms may hurt, but we are not hurting them. You ran off when you should have had your nap this afternoon."

Alice could only stumble along between them through the forest. She wished that she had gone in when Nurse called, for she felt miserable indeed.

Finally they came to a table under the dense shade of a great tree. There were four green chairs arranged about it. On one of them sat the Dormouse, fast asleep. The Hatter prodded him with his cane, but he only sighed and snored gently.

"Z-z-z-z-z," said the Dormouse.

"Have some tea," said the Rabbit politely.

"There isn't any," said Alice.

"She says there isn't any," said the Hatter.

"Z-z-z-z-z," said the Dormouse.

The Rabbit reached across the table and took the Hatter's tall hat from off his head.

"You are very rude," said the Hatter.

From the tall hat the Rabbit took a brown teapot, a plate of sandwiches and a handful of cookies.

"Hand me your cups, and I'll pour," he said.

"There are no cups," said Alice.

"She says there are no cups," said the Hatter.

"Z-z-z-z-z," said the Dormouse.

It Wasn't Really Tea

Again the Rabbit reached into the hat, this time bringing out four cups and four saucers. These he filled and politely served the guests before he took his own. The Dormouse slept on, while his cup steamed on the table before him. Alice put her cup to her lips and took several swallows.

"It is cocoa," she said.

"She says the tea is cocoa," said the Hatter.

"Z-z-z-z-z-z-z," said the Dormouse.

By this time Alice had nearly emptied her cup, although she knew it was neither polite nor healthful to drink so fast.

"You are very rude," said the Rabbit. He reached across the table and took her cup from her. Solemnly he filled it from the teapot and set it before her.

"It is milk," said Alice, drinking it.

"She says it is milk," said the Hatter.

"Z-z-z-z-z," said the Dormouse.

The Rabbit again filled her cup and Alice tasted again.

"It is lemonade," she said.

"You are very rude," said the Rabbit.

"But tea is served at tea parties," said Alice.

"Do you drink tea?" said the Rabbit, looking cross indeed. He evidently considered drinking tea a deplorable habit for girls the age of Alice.

"Yes," Alice replied.

"No wonder she couldn't keep up with us," said the Hatter. "Tea and coffee make my legs tremble."

"Mine too," said the Rabbit. "I just drink them for holidays."

"Z-z-z-z-z," said the Dormouse.

"Why does he sleep all the time?" asked Alice, glad to change the subject.

"Who?"

"The Dormouse."

"He never had proper training," said the Hatter.

"He had proper training, but was not a proper child," said the Rabbit. "Whenever bedtime came he would hide, or go to bed and read, or eat candy, or play at pillow fights. He never had any sleep growing up, and now he can't keep awake even at parties. His eyes go shut in spite of himself."

"Z-z-z-z-z," said the Dormouse.

"We took him to see the King and the Queen," said the Hatter. "We made him walk very fast, but he slept all the way. When we went through the palace gates the King—"

"Z-z-z-z—sneeze—z-z-z," said the Dormouse, opening one eye.

"And when we went up to the throne, the Dormouse went right to sleep, with his head on the Queen's shoulder. The Queen shouted, 'Off with his head!' but the King—"

"Z-z-z—sneeze—z-z-z," said the Dormouse, with both eyes shut.

"And we brought him home," finished the Hatter quite sadly.

Alice Wakes Up

"I'd never act like that!" said Alice. "I'd never go to sleep in company."

"You are asleep right now," said the Hatter.

"You are very rude," said the Rabbit. He began to shake the table hard, and Alice heard a voice saying,

"Here she is! Wake up, child!"

It was Father, shaking her awake. Alice rubbed her eyes and sat up. The forest, tea table and all were gone, and she was back in the orchard. Mother and Nurse were standing beside Father and were looking anxiously at her.

"Dear me, child," said Mother. "We have been dreadfully worried about you. What if you had slept out all night?"

"I'll always come in and go to bed at 8 o'clock," said Alice, feeling exactly like a Dormouse.

The Dormouse went right to sleep with his head on the Queen's shoulder.

HEALTH *and the* SCHOOL

Edited by J. Mace Andress, Ph.D., 67 Clyde Street, Newtonville, Mass.

Appealing to the Right Motives

THE field of health education is still new and, hence, is late in developing its teaching technic, but in common with all other subjects taught in our schools it recognizes that health education means training children in the right kind of behavior. The aim of health education might be defined as that of teaching boys and girls of all ages to live wholesomely. The word behavior, therefore, is to be thought of in a broad way. Dr. Franklin Bobbitt of the University of Chicago defines the problem of the teacher as that of surrounding "the pupil with the conditions, opportunities and influences that will result in right vision, right thinking, right valuations and finally in a continuous or right health behavior."

The great problem of health education as well as any kind of education is to find the springs of behavior. It leads one immediately to inquire what makes us behave. If we try to get an understanding of this problem from a biologic and psychologic point of view we realize that no organism acts except when it has needs. If we can imagine an organism that is not hungry, not thirsty, not sleepy and is without any sort of craving, we realize at once that it will not act. As soon as an animal becomes hungry he begins to do something—to hunt around for food. Whenever a need is present there is a tendency on the part of an organism to try to satisfy that need. The more intense the need, the greater will be the effort. It sometimes happens that a real need exists but the organism or human being may be unconscious of what should be done to bring satisfaction.

The efficient teacher today realizes that you can get children to do almost anything—eat spinach, drink milk, take exercise, bathe frequently and think straight—if they can be made conscious of certain needs and ways in which these needs may be satisfied. This is another way of saying that the well trained teacher knows how to appeal to children through the right

H. Armstrong Roberts

kind of motives. These motives vary with different ages and with different persons. In the lower grades a child may come to school with clean hands because he wants to get a star in the morning inspection.

When pupils reach high school such motives lose their power and others must be chosen that will be more effective. For example, some teachers in commercial departments have been able to get results in cleanliness by telling students that business men are less likely to hire anybody who is not clean and neat in his personal appearance, and that they hesitate to recommend pupils who are careless in personal hygiene. Cleanliness thereby becomes desirable when it is realized that it is a stepping stone to a position. It is not always easy to find a motive that will work, but the teacher is surprised at the lazy pupil who sometimes is inspired to put forth great energy when there is something presented that seems of value to him.

There is power in an attractive personality. Nearly everybody would like to be so pleasing that other people would like him and show him attention. Not everybody knows that a healthy person is much more attractive than an unhealthy one. Here is a chance to present a motive to young people that may make health worth striving for. This motive can scarcely be expected to work in the lower grades, but in high schools or colleges in which pupils are beginning to take a keen interest in the opposite sex the idea of being more attractive may lead to compelling action.

The educational division of the Massachusetts Department of Public Health realizing the drawing power of such a motive has prepared this score card and some suggestions that may be of help to teachers:

Are You as Attractive as Nature Intended You to Be? Score Yourself and See

SCORE CARD

	Perfect Score	Your Score
First Impression		
Have you pep?	70	.....
Have you control of yourself?	70	.....
Are you interested in other people?	70	.....
Have you confidence in yourself?	70	.....
Build		
Are you within 10 per cent below or 15 per cent above the correct weight for your years and height?	60	.....
Hair		
Is your hair glossy but free from excessive oil?	30	.....
Eyes		
Are the whites of your eyes clear?	20	.....
Are your eyes alert and bright?	20	.....
Can you read ordinary print at 15 inches or, if not, have you glasses?	50	.....
Ears		
Can you hear ordinary conversation at 16 feet?	60	.....
Teeth		
Are your teeth sound and are all cavities filled?	50	.....
Are they clean?	20	.....
Skin		
Is your skin clear (no eruptions)?	20	.....
Is it of good color?	20	.....
Is it clean?	20	.....
Mouth		
Are your lips naturally red?	20	.....
Posture		
Is your posture correct? Ask some one who knows what correct posture is.	60	.....
Feet		
Are your feet in good shape?	20	.....
Do you wear comfortable walking shoes (straight inner line, low heels) during business hours?	20	.....

Muscles		
Are your muscles firm and elastic but not flabby?	40	.....
Clothes		
Is your clothing clean and neat?	50	.....
General Health		
Are you free from recurring pain?	70	.....
Are you free from constant infections including colds?	70	.....
Total	1,000	.....

If your score is not what you would like it to be, why not improve it? Are you doing these things:

Eating each day:
- Whole grain cereal or dark bread?
- Some fruit?
- Two vegetables (besides potatoes), one of them raw?
- Some milk, eggs, meat, fish, cheese or nuts?

Eating slowly?
Drinking six glasses of water every day?
Omitting sweets except for dessert?
Sleeping at least nine hours with window open each night?
Brushing the teeth and gums morning and night?
Having a bowel movement without the aid of medicine at least once a day?
Taking exercise in the fresh air every day?
Bathing frequently?
Facing life with courage?
Visiting the dentist at least once a year?
Having a physical examination every year?

TEACHING HEALTH

(In this column will be published each month concrete examples of good health teaching. Teachers are invited to send in contributions not exceeding 600 words and preferably less to the editor of this department. Illustrations of the actual work of children will be welcomed. Contributions accepted will be paid for but no manuscripts will be returned.)

WHY STAND STRAIGHT?

"DOROTHY, please go to the library and bring the November number of HYGEIA. I want the class to study an article on the care of the feet." A tall girl rose from the back seat and walked to the door. She stood so straight and moved so gracefully that one might have suspected the teacher chose her as his messenger because he took pleasure in seeing her beautiful carriage.

"Pupils, while Dorothy is out of the room let me call your attention to the way she stands and walks. When she returns notice her carefully and see if you can tell what about her posture is so pleasing. But say nothing to make her think you are observing her."

Thus the teacher obtained a model for posture study who was free from embarrassing self-consciousness. As Dorothy brought in the magazine she was asked to open it to page 627 and read a paragraph to the class. "Now turn and read the next sentence to me," said the teacher, providing the pupils with a side view.

"Thank you, Dorothy. You may be seated. I am sure you will pardon us if we comment on your posture. We are all trying to acquire a beautiful carriage and your example may help us."

One after another the pupils were asked to tell what they saw in Dorothy's carriage that was pleasing. One said she was so tall, another that she stood so straight, another that she held her head up and another that her chest seemed strong.

"Did she seem to be thinking of herself or of how she was standing?"

"No, she was thinking of what she was reading and of us to whom she was reading."

"What feeling about herself would be in harmony with her way of standing? Would embarassment?"

"No."

"Would self-respect?"

"Yes."

"Might it be that you are pleased with her carriage because it expresses dignity, self-respect and thought directed to what she is doing instead of to herself?"

"That is it."

"James, you may take the magazine and read the next paragraph." A boy with a self-conscious grin took the book, sidled up the aisle and began to read before he had fairly got into a lop-sided position half facing the class. His rapid pronunciation of words conveyed little meaning to the pupils and the misplaced pauses and lack of emphasis showed that he himself failed to understand the thought.

"James, let's see if we can get something more out of that paragraph. First, try to push this ruler up with your head." The teacher, standing behind the boy, held a ruler an inch above his head. As the lad straightened up the ruler was allowed to rest lightly on the back top of his head.

"Now continue to push up against the ruler while you read again. This time try to make the pupils understand what arches are in the foot and how their weakness results in pain" (the topic of the paragraph). The class breathed a sigh of contentment. There was something in the reading this time.

"Pupils, if you want a slouchy person to stand straight, how do you direct him to carry himself?"

"He should throw his shoulders back," said a girl.

"Jack, stand up and show us how to throw your shoulders back."

Jack's exaggerated effort brought a giggle from the class.

"What is the matter with his posture?"

"He pushes out his stomach," said one urchin.

"Jack, keep your stomach back."

Still there was the smile at the stiff and labored position.

The teacher placed a heavy hand at the top of the boy's chest. "Now press my hand up with your chest." The pupils were satisfied with the improved posture.

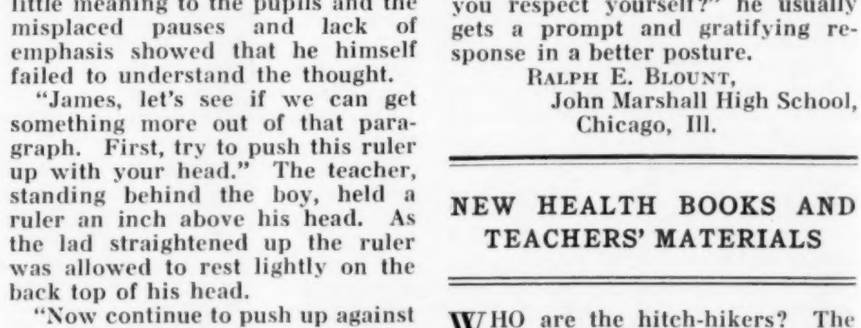
Thus the teacher brought the children to assume a good posture not by thinking of how to hold their shoulders, their abdomen, or chin—self-conscious thoughts that result in stiffness—but rather by thinking of something outside themselves, a weight on the chest, a mark above the head, reacting to which brings them into the desired form. They repeatedly practiced pushing the sky up with their heads and in imagination carried weights on their chests. They now value a good carriage more highly because they see that it expresses beautiful character. If the teacher, seeing a pupil in a dawdling, sloppy attitude, comes past and says quietly, "Are you showing me how much you respect yourself?" he usually gets a prompt and gratifying response in a better posture.

RALPH E. BLOUNT,
John Marshall High School,
Chicago, Ill.

NEW HEALTH BOOKS AND TEACHERS' MATERIALS

WHO are the hitch-hikers? The title of this book [1] is enough to pique the curiosity. Like all good stories it leaves you in suspense. You read page after page of interesting narrative. Some of it about

1. Hitch-Hikers. By W. W. Peter, M.D., Dr.P.H., and Grace T. Hallock. Pp. 54. Cleanliness Institute. New York, 1930.


A
B
C
D
E
Mouth or Nose of Sick Person or Carrier
Fingers of Sick Person or Carrier Contaminated with Discharges from "A"
An Object Handled by "B"
The Hands of a Well Person Coming in Contact with "C" Shortly after Its Contamination by "B"
Mouth or Nose of the Well Person Touched by "D" Shortly after Their Contamination by "C"

man's struggle for supremacy with his visible foes and his invisible enemies is thrilling. For centuries these invisible foes, the microbes, had their own way in their victorious assaults on mankind. Even the invention of the microscope did not stop them. After they were visible, man was for a time more concerned about their origin than he was about their relation to himself.

Not until the time of Louis Pasteur and Robert Koch did the world understand that communicable diseases were the result of the invasion of the body by micro-organisms. There they live, produce poison and cause sickness and even death. When microbes are transported in various ways into the bodies of well persons whom they in turn make sick they are called in the language of the authors "hitch-hikers."

The business of hygiene is to see that these malignant germs do not "catch a ride" from a sick person to one who is well. They cannot transport themselves but they are adept in catching rides into the human body on the supplies that man needs for his own life. They may be transported by air, liquids or food. One of the weapons that man may use is the handkerchief. This means of defence was a rarity up to the end of the sixteenth century. Before that time noses were wiped on the cuffs or with the fingers of the left hand.

The authors of this unusual book have contributed something vital to the teaching of health. The warfare against disease is presented as a romantic adventure and struggle. It is written in such a style that children of the upper grades and high school will understand. Many illustrations such as the one shown on the preceding page make clear to the reader the routes of transmission of infection. Every live teacher of hygiene will want this book.

IT IS fitting that Massachusetts in the celebration of its tercentenary should not forget the contribution of medicine to the welfare of the commonwealth and the nation. Dr. Viets has written a book [2] that will appeal not only to physicians but also to the intelligent layman and teacher. Teachers of hygiene who wish to inject into their lessons something that is fresh and unusual will find in these stories of long ago many an illustration that will make an ordinary lesson fascinating.

The reviewer would like to recommend this volume to the teacher of history. The ordinary school text leaves out medicine. How interesting it would be for pupils to hear about the barber surgeons, and of the early colonists' dependence not only on those who practiced medicine as a profession but particularly on the governors, ministers and schoolmasters for medical treatment.

THE press is pouring forth so many texts on psychology that one wonders what excuse there might be for a new one. This query is answered at once as one turns to Dr. Strang's "Introduction to Child Study." [3] Most books on psychology organize the material around particular topics such as attention, memory and emotion rather than around stages of development. This method of approach has its advantages. Its great disadvantage is that the teacher in dealing with concrete situations needs to know not how to deal with children in general but with John or Mary.

Dr. Strang's book is helpful because she not only gives a view of orientation in child study that takes in the whole territory of childhood but she considers the different periods of childhood. Both mental and physical hygiene are stressed. This should be a decidedly helpful book for parents and teachers.

LIKE all the bulletins in this series, "Checking the Spread of Germ Diseases" [4] is brief and practical. It is interesting to note that the word "parasite" did not originate in connection with disease. It comes from a Greek word meaning one who was a hanger-on in the houses of the rich, living on somebody else without making any adequate return. This is a fundamental biological problem since caterpillars, beetles, fleas and tapeworms are parasites. Disease germs are also parasites and can be transferred from one person to another. The three chief modes of transmission are often described as the three f's—fingers, food and flies. At the end of the bulletin there are some suggestions as to how the class might make a study of the sanitary condition of the schoolroom and the home.

THE newer kind of health instruction lays much emphasis on associating pleasure and imagination with its activities. One of the most dramatic ways of doing this is through the pageant. It is possible to get children to perform certain health habits because pressure is applied but they may lapse after that pressure is removed. If the practice of habits is combined with activities that enlist the child's interest and desire it is more likely to result in stable habits and attitudes.

Miss Strassler, alive to the opportunities of an appeal to the imagination, has worked out with junior high school pupils a pageant [5] that would seem to have definite educational value. The book has been written with so much detail that teachers will find it easy to put on the health revue in their own schools.

TEACHERS and the general reader will welcome this new adventure of Dr. Fishbein's [6] into the borderlands of medical science. Modern medicine and hygiene are guiding us away from fear and superstition. Primitive man believed that evil spirits were responsible for disease. Since strange demons inhabited the human body, trephined openings were often made in the skull so that they might escape. Prayers warned them and strong smelling powders frightened them away. The belief in the power of magic still lingers, as is indicated in the book by numerous clippings from newspapers. Nearly everybody shivers to hear a dog cry at night. We have all been told that it is a sign that somebody is going to die.

Fifty-seven superstitions are shattered by Dr. Fishbein in this unusual volume. Every chapter deals with one superstition, which is stated as the heading of the chapter. These headings are intriguing. One wonders what the author will say about:

"Hurry, hurry," shrieked mother, "he scratched himself with a rusty nail."

"Many people still believe that cutting the baby's hair will weaken it; that is, the baby."

"It takes whisky to kill a cold."

"Almost every one believes that a receding chin is the sign of a weak character."

Have you any health superstitions? Do the pupils of your classes believe in these superstitions? Try an experiment. Mimeograph these fifty-seven chapter headings, with some modification when necessary, and let every member of your classes mark each one true or false according to his beliefs. This will open the way to some warm class discussions in which "Shattering Health Superstitions" can be introduced effectively.

2. A Brief History of Medicine in Massachusetts. By Henry R. Viets, M.D. Pp. 194. Price, $4.00. Houghton Mifflin Company, Boston, 1930.

3. An Introduction to Child Study. By Ruth Strang, Ph.D. Pp. 549. The Macmillan Company, New York, 1930.

4. Health Bulletin for Teachers. Pp. 4. Metropolitan Life Insurance Company, New York, October, 1930.

5. A Health Revue. By Margaret Strassler. Pp. 75. Price, $1.50. A. S. Barnes and Company, New York, 1930.

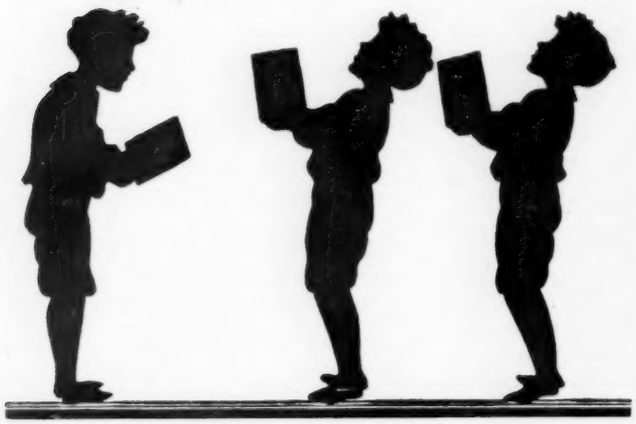
6. Shattering Health Superstitions. By Morris Fishbein, M.D. Pp. 245. Price, $2. Horace Liveright, New York, 1930.

MAKING POSTURE EXERCISES ATTRACTIVE

THIS exercise may be conducted by a girl (or boy) of 10 or 12, who recites from the front of the stage:

"It is not the load one carries
That breaks the bearer down,
But the way the load is carried,"
Sings a poet of world renown.

And I'm taking this quotation
As a text for my posture talk;
A talk on how to sit and stand
To write, to sing, to walk.



If you carry your load, whatever it is,
Potatoes, or schoolbooks or foes,
With shoulders hunched and sagging knees
You've simply doubled your woes.

But if instead you stand erect
Good posture in every line,
You'll find your burdens cut in two,
Your strength like a baseball nine.

(Girl steps to right front.)

And now to illustrate my point
I'll introduce to you
Some boys with postures good and bad;
Now watch what each will do.

When Thomas Sloven walks to school
He slouches and he stoops;
He's a most ungainly looking lad
From his head down to his boots.

(Enter Thomas, slouching across stage.)

Then Peter Posture comes along,
His face alight with joy,
With head erect and shoulders square,
He's a happy, whistling boy.

(Peter crosses stage, whistling. Two boys take seats at desks on the stage.)

Now let us look inside the school.
Thomas's brother is there,
Sitting with toes turned in like a frog's,
And his back a rocking chair.

Behind him Peter's brother sits
Head up and shoulders squared,
As if he'd had ten hours of sleep;
On healthful food he'd fared.

(Boys take out singing books.)

Now Miss M— for music comes in,
And she frowns at Thomas's brother,
For with head thrust out and chest hollowed in,
She knows the notes he'll smother.

But look at the other's posture, please.
He knows he has nothing to fear.
With head erect and book held high,
He sings for the whole world to hear.

(Seats are removed. Speaker continues.)

Some boys and girls,
I regret to say,
Do not always stand
In the very best way.
They slump and they hump,
They thrust out their chin,
And the way that they pull in
Their chest is a sin.

(Illustrating this verse a group of boys and girls enter left.)

Behold, now, a group
That you like to see.
Their knees are as straight
As straight can be.
Heads up, chin in,
Chest up, waist flat,
For a standing posture,
Friends, how's that?

(Illustrating this verse, a group of boys enter right.)

Here comes a group of paper boys,
Note how they carry their pack.
I'm afraid when they grow up they'll have
A curvature in their back.

(Boys carry delivery bags over one shoulder.)

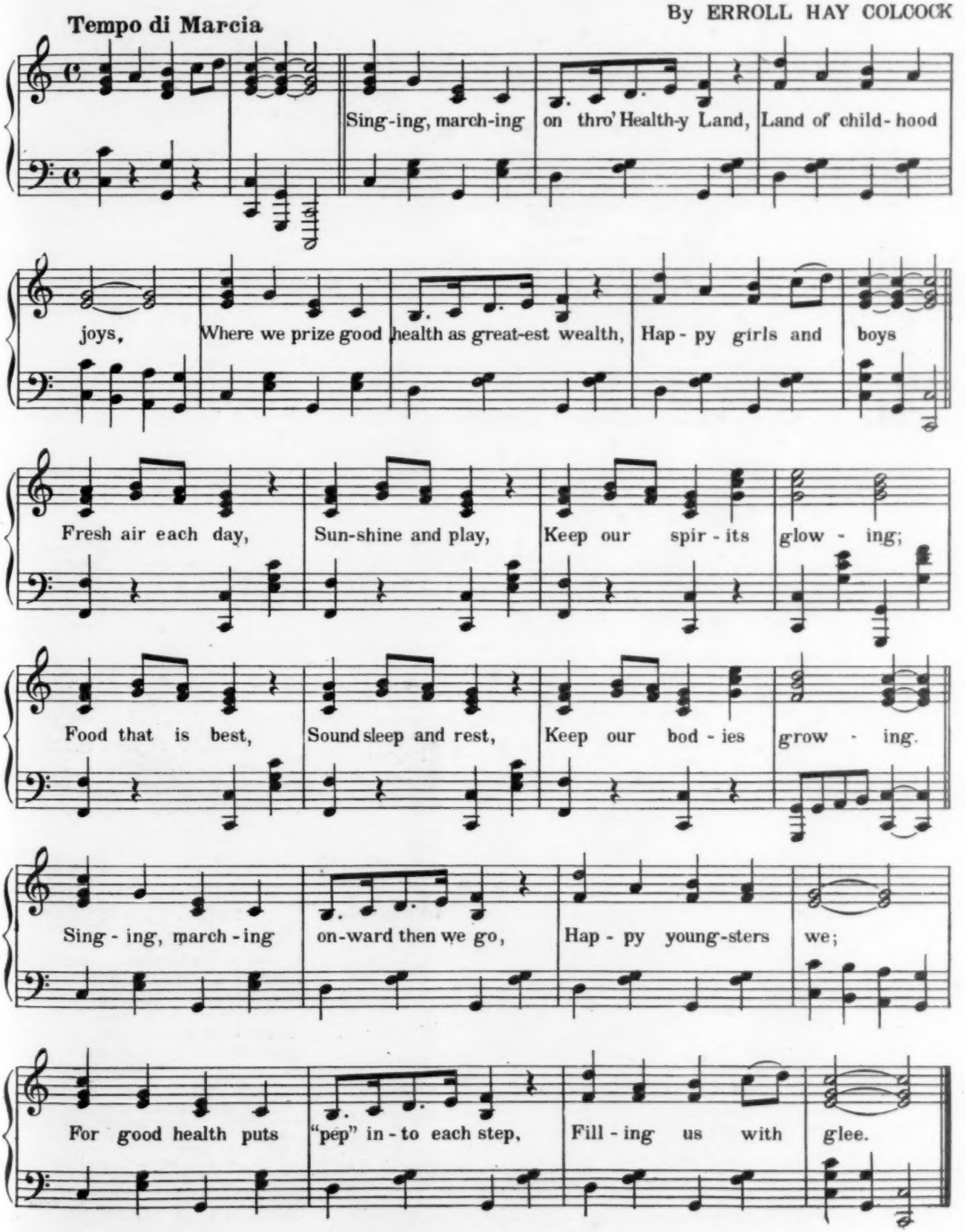
And here are some other paper boys
Who have learned the way to do.
Half the weight on either side
Keeps muscles straight and true.

(Speaker steps to front center.)

Now that I've shown you postures good
And postures bad tonight,
Which one of all the boys you've seen
Do you want your boy to be like?

ALICE CLARK GILMORE,
Westboro, Mass.

Healthyland March

By ERROLL HAY COLCOCK

Tempo di Marcia
Sing-ing, march-ing on thro' Health-y Land, Land of child-hood
joys, Where we prize good health as great-est wealth, Hap-py girls and boys
Fresh air each day, Sun-shine and play, Keep our spir-its glow-ing;
Food that is best, Sound sleep and rest, Keep our bod-ies grow-ing.
Sing-ing, march-ing on-ward then we go, Hap-py young-sters we;
For good health puts "pep" in-to each step, Fill-ing us with glee.

New Books *on* Health

PRACTICAL PSYCHOLOGY AND PSYCHIATRY

By C. B. Burr, M.D. Cloth. Price, $2.75. Pp. 378. F. A. Davis Company, Philadelphia, 1930.

THIS book, in its sixth edition, is prepared largely for attendants and nurses and as a reference work for the physician who wishes to have in brief form current views regarding disturbances of the mind. Dr. Burr writes in an extremely pointed manner.

The book is not intended for the average reader. It will be far beyond his general comprehension and merely arouse his curiosity. Dr. Burr is inclined to believe that the old rigid life with its severe discipline is superior to the modern system of coddling. His book concludes with an appendix on women and marriage based on correspondence aroused by a previous edition. His final conclusions are:

"Summing up, mental hygiene implies good food, temperance in all things, systematic work, suitable exercise, education in useful lines, boy-scout activities, botanizing, walking (the automobile is used too much), establishing habits of self-control and respect for 'mine and thine.' These are all contributory to 'mens sana in corpore sano.' The latter is idealistic—there is no such thing as a (perfectly) sound mind in sound body (even a Roosevelt was near-sighted), but attainment so far as possible of the goal in view would mean much to the structure of civilization."

MORRIS FISHBEIN, M.D.

THE DIAGNOSIS OF HEALTH

By William R. P. Emerson, M.D. Price, $3. Pp. 272. D. Appleton and Company, New York, 1930.

THE words "healthy" and "sick" are only relative terms. It is doubtful if any one is ever in perfect health, as postmortem examinations reveal pathologic changes in practically every one that is examined.

It is simple, however, for one person by looking at another to tell if he is in good health. He is physically fit, his eyes are clear, his color is good, his mouth is closed, his teeth are good, the skin is clear and firm and the posture is erect; he walks with a springy gait, the weight is about right for his height, and he looks young and vigorous. By contrast, the person who is unfit is negative where the person that is physically fit is positive. He is discontented and unhappy and seems to lack what is commonly referred to as tone.

Dr. Emerson has long been campaigning for periodic examinations. In this book he covers all of the characteristics of health mentioned above, providing a consideration of the normal, outlines for attaining the normal, and case studies of what has been done in improving tone. His book will be exceedingly useful to physical trainers and to all interested in public health.

M. F.

MARKETING AND HOUSEWORK MANUAL

By S. Agnes Donham. New Edition. Price, $2. Pp. 248. Little, Brown & Co., Boston, 1930.

THE inexperienced housewife will find this book by a home economist an ally in the struggle to keep down the grocery bills and to keep up with the housekeeping routine. Even veteran housekeepers will find their job less time-consuming if they are not averse to trying out an occasional new method.

Originally published in 1917, this volume has been revised to meet new conditions, new knowledge and new methods. Marketing and menu-making take up the first half of the book, and the lessons are made practical by numerous buying charts dealing with meats, fruits and vegetables, groceries and household supplies. The location and characteristics of various cuts of meat are described, as are points of choice in selecting fruits and vegetables, the amount to buy for families of varying sizes, their care in the home after delivery, and the mineral, carbohydrate and vitamin values of each.

The second part of the book concerns itself with housekeeping problems, considering the house room by room beginning with the cellar. A helpful chapter on house inspections gives pointers to prospective renters and buyers, together with seasonal inspection suggestions to home owners.

It would seem that an hour or two spent in the study of this manual would save many hours in the housewife's yearly grind.

MILDRED WHITCOMB.

ABNORMAL PSYCHOLOGY

ITS CONCEPTS AND THEORIES. By H. L. Hollingworth, Ph.D. Price, $4.50. Pp. 590. The Ronald Press Company, New York, 1930.

THE author of this volume is professor of psychology in Barnard College of Columbia University. Abnormal psychology is one of the borderline subjects between medicine and the basic sciences. In order to understand it, one must have a complete knowledge of the anatomy of the nervous system and its physiology, as well as a back-ground showing trends in the subject.

Dr. Hollingworth rightly begins his book by a series of chapters discussing such trends, citing in each instance cases indicating the application of the particular method to the practical aspects of the subject. Later chapters concern the special subjects of the feebleminded, the origin of fundamental disorders and the concepts of such leaders as Janet, Freud, Adler and others who have greatly modified modern points of view. He deals with dreams, stuttering and stammering, aphasia and epilepsy.

While the volume contributes nothing extremely new, it does provide a simple and logical approach to the subject and cases that indicate the practical application of the information supplied.

M. F.

A PRIMER FOR DIABETIC PATIENTS

By Russell M. Wilder, M.D. Fourth Edition revised. Price, $1.50. Pp. 138. W. B. Saunders Company, Philadelphia, 1930.

DR. WILDER'S new edition of his Primer for Diabetics is a clear and comprehensive manual for the patient. His foremost thought is for the patient to put himself under the care of a physician who is competent to handle not only the disease but its graver complications. Probably the greatest benefit of any such manual is obtained from the use of the diabetic form diets and recipes; the ones herein contained certainly are very helpful.

HERBERT F. BINSWANGER, M.D.

PRICES REDUCED. — Five books of the Williams & Wilkins popularized science series reviewed in the last number of HYGEIA have been repriced at $1. These are: The Beaver, Animal Life of the Carlsbad Cavern, Man and His Affairs, Birth Control, and Hygienic Fundamentals of Food Handling. Others of the series were listed at $1 in the review.

Underwood and Underwood

WINTER SPORTS IN CHICAGO

Chicagoans are skating their way to health in the largest ice rink in the country, recently opened in the Chicago Stadium.

A FLYING DUTCHMAN

This veteran skier makes a difficult jump-turn while enjoying winter sports at St. Moritz, Switzerland.

Underwood and Underwood

Alvina Lenke Studio

THIS BEGINNER SEEMS DETERMINED to land somewhere.

RUNNING SPEED LIMIT IN THE ALPS

It is an art to stay on the bobsleds which sometimes speed at a mile a minute around sharp turns. The picture was taken at Davos, Switzerland.

Herbert Photos

AIRPLANE MODELS FOR PATIENTS

Boy and girl patients in the Graduate Hospital at the University of Pennsylvania will be taught the principles of airplane construction by these teachers of occupational therapy who are studying the airplane model.

Underwood and Underwood

Pacific and Atlantic

TOWSER HAS A DOCTOR

These Boy Scouts showed how to give first aid to injured animals, at the annual scout merit badge exhibition recently.

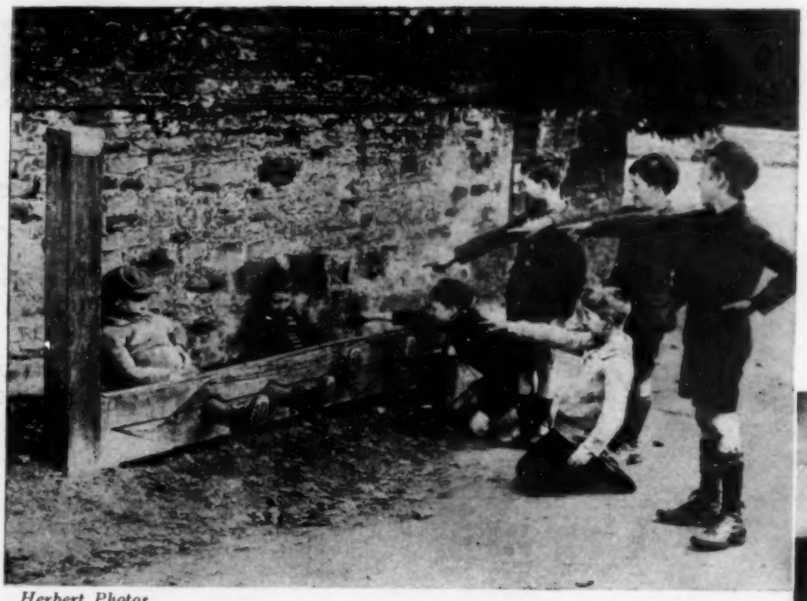
MILK DRINKERS

The National 4 H Club health champions of 1930 say that they drink milk every day.

Pacific and Atlantic

Underwood and Underwood

FIRST AID IS A PART OF THE PROGRAM of these California volunteer firemen.



Herbert Photos

PENALTY FOR SKIPPING SCHOOL

Boys who play hookey in Shalford, England, are placed in the 500 year old stocks by their classmates.

WHILE THE TEAM AWAITS A BASKET

A University of Pennsylvania basketball player is now in good midseason form.

Underwood and Underwood

Herbert Photos

NORWAY'S PERFECT BABY

Rolf Rolfson, has already captured three baby prizes at the age of 1 year.

Herbert Photos

CAMELS IN TUNISIA, AFRICA, draw water for irrigation.

Questions *and* Answers

Value of Blood Count; Chronic Catarrh

To the Editor:—Will you please explain how a blood test helps in the diagnosis of appendicitis? Is chronic ethmoiditis the same thing as chronic catarrh?

A. C. B., Pennsylvania.

Answer.—In the presence of an inflammation with the formation of pus, the number of white corpuscles in the blood is usually increased. A count of the white blood corpuscles, therefore, showing a decided increase above the normal number, is one of the signs of such an inflammation.

Chronic nasal catarrh means simply a continuous discharge from the nose. It is usually associated with chronic inflammation of the sinuses opening into the nasal cavity. One of these is the ethmoid sinus which may or may not be involved in the condition when nasal catarrh is present.

Radium for High Blood Pressure

To the Editor:—Please give me information about the use of radium in diseases that involve the circulation of the blood—high blood pressure, arteriosclerosis, and paralysis resulting probably from high blood pressure. My husband has been suffering from these troubles for several years and, so far, has not secured relief from any of the many treatments, diets and massage that he has tried. He is 57 years old. I have read from time to time of some of the wonderful possibilities of radium. Won't you please let me know what might be done and has been done, where to go for treatment and all other information necessary.

W. F. D., Texas.

Answer.—A physician who devotes his attention exclusively to the use of radium replies as follows:

"Radium has been used more or less for a number of years in the treatment of high blood pressure, along with other measures in a limited number of cases. Practically all these cases showed some improvement, some of them material and satisfactory improvement. I have never noted any harmful results associated with its use, but such may have been observed by others."

One who has tried the various other methods of treatment used in this condition might undertake treatment by radium, but he should never do so except on the advice of a skilful, conscientious physician thoroughly familiar with the condition and this physician should refer him only to a radiologist of large experience and demonstrated ability.

Head Noises

To the Editor:—Is there any known cure for head noises, common among hard-of-hearing people? Is there any research work being done on this at present? Is the American Otological Society doing any research work of this kind?

R. A. E., Missouri.

Answer.—There is no known cure for head noises in many cases, especially when they accompany chronic disease of the ear of long standing. On the other hand, it is a fact that "ringing in the ears" is a common symptom even in the early stages of ear diseases and in acute cases. In individuals suffering in this way the cause may be a foreign body in the ear, or pressure of wax on the drumhead, or it may be due to inflammation and obstruction of the eustachian tube which cause circulatory disturbances in the middle ear. In such cases appropriate treatment by a competent otologist often gives satisfactory results. Head noises may also be due to general bodily disease such as anemia, disturbances of the heart, and increased or diminished blood pressure.

It should be remembered, however, that head noises do not constitute a disease but are merely a symptom that there is something wrong with the hearing apparatus. So far as we know there is no special research being carried on covering this particular field. The American Otological Society is carrying on an extensive line of research on otosclerosis, in which disease this symptom is prominent.

If you have a question relating to health, write to "Questions and Answers," HYGEIA, enclosing a two-cent stamp. Questions are submitted to recognized authorities in the several branches of medicine. Diagnoses in individual cases are not attempted nor is treatment prescribed. Anonymous letters are ignored.

Coca-Cola

To the Editor:—I have been told that there is a harmful and habit-forming drug in Coca-Cola. What is this drug?

F. M. C., Oregon.

Answer.—Caffeine is admittedly the active drug in Coca-Cola. In 1909, the United States government chemists analyzed Coca-Cola and reported, in effect, that it contained caffeine, phosphoric acid, sugar, alcohol, caramel, glycerin, lime juice, essential oils and plant extractives. In the manufacture of Coca-Cola, it seems that decocainized coca leaves are used, possibly so that the makers may have some excuse for the use of the phrase "Coca" in the name of the product. The Coca-Cola makers themselves have admitted and advertised the fact that their product contains caffeine. They have published analyses showing that in 1909 the caffeine present in one ounce of Coca-Cola syrup was about 1¼ grains.

In October, 1925, the laboratory of the Department of Health of the State of Louisiana analyzed Coca-Cola syrup and reported that it contained 73.06 per cent total sugars, of which 19.98 per cent was sucrose and 53.08 per cent reducing sugars. They also reported that there were phosphoric and citric acids present, with a total acidity (as citric) of 0.64 Gm. per hundred cubic centimeters. They reported, further, finding 0.13 Gm. per hundred cubic centimeters of caffeine. There were also found certain vegetable extractives and essential oil flavoring, with caramel for the coloring. No cocaine, saccharine or preservatives were found. About the same time the chemical laboratory of the American Medical Association also tested Coca-Cola for the presence and quantity of caffeine. They reported that Coca-Cola syrup contained the equivalent of about ½ grain of caffeine to the fluid ounce.

The medical profession has for years taken the attitude that the presence of caffeine, in the enticing form of a soft drink, is objectionable, especially so when children are using this product freely. Unfortunately, the average parent offers no objection to his children's using Coca-Cola, because he does not realize that it contains caffeine.

Snake-Bite Poisoning

To the Editor:—Is it a good practice in cases of snake-bite poisoning to pack the wound with crystals of potassium permanganate? This plan is widely practiced in the region in which I live, but I have read that it is not a good method. I have seen many items in the newspapers on the failure of polyvalent antivenin to overcome snake-bite poisoning. One case report stated that the person bitten was given polyvalent antivenin for the snakes of that territory and presumably good, therefore, for the particular snake by which he had been bitten. The antivenin was administered practically immediately after the bite, but the patient died. What is the explanation? R. M., North Carolina.

Answer.—Packing wounds with chemicals tends to retard the flow of blood so that venom contained in the latter is not drained away and only the venom in the blood touching the chemical is affected (if at all) by it. Of course a solution of potassium permanganate can be used but not packings of the dry chemical.

Being bitten even by a poisonous snake does not mean that one may be fatally affected, for in some instances the poison glands in the snake that did the biting may not be functioning and in other cases only a small amount of venom may have been secreted. It is of course impossible to know just when these conditions actually occur and this can only be determined by avoiding treatment and observing the systems of the animals bitten. But knowing from experimental observation that these conditions prevail, it is of course possible to hear of individuals being bitten by poisonous snakes and reporting miraculous cures by this and that remedy when in fact no treatment at all in those specific cases would have yielded the same results as did the treatment employed.

Concerning the comment on antivenin, it is of course a known fact that newspaper reports may mislead one as to the value of a preparation, because all the facts are not contained in such a report. The following comments on antivenin will perhaps clear up some misunderstandings: If considerable time has elapsed before the injection of the antivenin or if there is reason to believe that a large amount of venom was deposited when bitten, more than one syringe of the antivenin should be injected. At all times if there is no improvement within four or five hours after an injection a second dose of antivenin should be administered and a third or even fourth dose may be indicated if after a six-hour interval there is no improvement.

Children require larger doses of antivenin than would be necessary for an adult bitten by the same poisonous snake, as the same amount of poison distributed in a 75 pound child is more toxic than when distributed in a 150 pound adult.

There is always a possibility that the fangs of the poisonous snake penetrated a vein and the venom was deposited immediately into the blood and circulation. Antivenin can be of value here only if it is used in large doses and only when intravenous injections are given immediately. If too much time elapses before the injection is given or if antivenin is given beneath the layers of the skin and not into the veins to reach the venom in the circulation, death may result. This is what actually has happened in the few cases that have received nation-wide publicity. Insufficient quantities of antivenin have been employed, too much time has been allowed to elapse before the injection has been given and then instead of the injection being given directly into the blood (intravenously), a subcutaneous injection has been given resulting in a greater lapse of time before the antivenin has been able to reach the venom.

Mental Disease

To the Editor:—What is meant by a psychopathic personality? What is meant by emotional instability? Is a person described in these terms insane? If so, is the insanity curable? Is it hereditary? Could it be caused by using drugs, sedatives or alcohol in any form? If the person could be induced to stop these habits (of about three or four years' standing), could he be restored to a normal condition without any trace of these symptoms? Are the drugs the direct cause of the mental condition? Can such a person marry? What is the difference between a psychopathic and a neuropathic taint? J. E. M., New York.

Answer.—A psychopathic personality is one that is not normal. Any instability of the mind is likely to manifest itself in the emotional field. Whether or not such a person is insane depends upon the type and degree of the trouble. In this connection it may be well to point out that what may be called medical insanity may not be insanity from a legal point of view.

Heredity is undoubtedly an important factor in the causation of psychopathic instability. Drugs such as narcotics or alcohol may also play an important part. It is true, however, that such mental instability is one of the conditions that lead to addiction to drugs, including alcohol. The possibility of a cure of addiction is largely dependent on the individual's ability to control himself. Whether or not a person with such a mental condition can become entirely normal depends again entirely on the degree of the trouble and the conditions that surround the patient.

Psychopathic means literally a departure from the normal condition of the mind. Neuropathic means an abnormal condition of the nervous system in general. The terms are often rather loosely used.

Light Treatment for Cataract

To the Editor:—I am 63 years old and in good health generally, but about six months ago I began noticing spots in my vision which the doctors have pronounced cataract. They tell me I must wait indefinitely for them to develop fully before I can get any relief through an operation. A friend of mine has told me that there is a new treatment for cataract, which is an absolute cure if it is given before the cataract becomes hard. He says that it is a new discovery, less than a year old, and consists in the use of what he calls quartz rays. He further states that the best eye specialists are graduates from a world renowned school in Vienna, and those who are not simply cannot have the necessary knowledge as it is not obtainable elsewhere. He has been told that there are no possible ill effects from the treatment.

D. F. Y., Texas.

Answer.—"Light" treatment has become popular for a variety of diseases. Its efficacy is dubious, its use uncertain, and its popularity will decrease in time. There is no doubt of a limited value in several kinds of light therapy, but it is unfortunate that new forms of treatment are exploited by the ignorant and avaricious. All that is known at the present time indicates that the crystalline lens of the eye is harmed by intense light and heat. When ultraviolet light is used on the lids and superficial tissues of the eye, care should be taken to prevent its reaching the lens. A cataract is an opaque lens. Transparency of the lens is essential to good vision. In rare instances a baby is born with cataracts, young people occasionally develop cataracts, many people get cataracts from injury to the eye, and nearly all elderly people have some opacity of the lens, which usually does not lead to blindness. In general, impaired nutrition of the eye causes cataract. It is a common senile development. No treatment offers any definite help in clearing, or dissolving, a cataract. Surgical removal is usually successful. Light is either useless or harmful in the treatment of cataract.

Cod Liver Oil; Diet; Teething Lotion

To the Editor:—1. Is it necessary to give cod liver oil to babies during the summer months if sun baths are given every day possible? 2. What should be the diet for a child 1 year old and what additions and changes are made at 18 months? 3. Are teething lotions of any use to aid a baby in cutting teeth?

R. W., Ohio.

Answer.—1. Sunlight accomplishes some of the effects of cod liver oil, but it is not a complete substitute. Whether or not a particular baby should be given cod liver oil depends on the condition of the baby and to some extent on the weather and locality.

2. The diet of a child, 1 year old, is discussed in a pamphlet on infant care published by the American Medical Association entitled "Your Baby—How He May Be Kept Well." This gives advice on the feeding of a child through the third year.

3. It is doubtful if teething lotions are of aid in teething.

Tuberculosis Germs

To the Editor:—Will you give me information regarding tuberculosis germs? A man in the last stage of tuberculosis came to our home to visit. He would sit in the room and cough hard for half an hour at a time with open mouth, never putting a handkerchief or anything over his mouth, just throwing the germs out by the millions at each breath. I am worried about this until I am almost crazy. Of course, the rugs, furniture and walls are all infected, aren't they? I sprayed the rug with strong Lysol solution. The ceilings are 12 feet high and I am not able to do anything with them, but they are dangerous, are they not? I scalded the dishes he used. How long do tuberculosis germs live? Is there anything that will positively kill them? We live in the country and have an outdoor toilet. I cleaned it thoroughly with disinfectant. What should be done for perfect safety?

R. E. C., Illinois.

Answer.—The inquirer has worried to excess over the matter of the tuberculous visitor. The fact is that the bacilli of tuberculosis are omnipresent. Every one breathes in some of these germs almost daily. Of course it is advisable to avoid close contact with an active case of consumption, but the extent to which such association increases the danger of infection is only one of degree.

Thorough cleansing, by the usual household methods, of the rooms occupied by a tuberculous person is the right thing to do. One of the best methods of sterilizing rugs, carpets and bedding of any sort that cannot be burned or washed in the tub is to beat them thoroughly in the open air and then leave them exposed to the sunlight and open air for several hours a day for several days. The tubercle bacillus does not live long outside of the body and is readily destroyed by these methods. If any germs were left on the ceiling, they should give no occasion for worry. Thorough ventilation and the admission of sunlight to the room will take care of them.

As to the outdoor toilet, the cleansing done should be ample to destroy this source of infection.

Definitions of Medical Terms

To the Editor:—Please explain the following conditions, the causes and cures: mitral stenosis, spina bifida occulta, and a double pelvis (kidney) and double ureter.

C. C., Florida.

Answer.—Mitral stenosis means a narrowing of the orifice between the left auricle and the left ventricle of the heart by reason of which the flow of blood through this orifice is interfered with.

Spina bifida occulta means a limited defect in the spinal column, consisting in the failure of the arches of the vertebrae to come together and close completely the canal which encloses the spinal cord, there being, however, little or no protrusion of the cord or its membranes through the opening, as is the case in ordinary spinal defects. The site of the defect is made known only by a slight growth of hair.

The term double pelvis of the kidney means that the pelvis is divided into two parts with a tube or ureter leading from each half of the pelvis to the bladder; in such cases the ureter is known as a double ureter.

Finger Nails

To the Editor:—What causes finger nails to be soft and easily broken? Mine are about the consistency of paper. As soon as they grow to the ends of my fingers they peel rather than break, because they are not brittle enough to break. I wonder if anything I eat could affect them and if you can suggest some remedy.

G. M. S., Indiana.

Answer.—The soft condition of the finger nails is one of several abnormalities of the nails which are not infrequent. As to the cause, heredity sometimes plays a part, as it has been frequently noted that more than one member of a family has such defects. Any constitutional disease or condition of insufficient nutrition and vigor may be accompanied by this defect of the nails. Certain local diseases of the nail bed may also cause it. This abnormality of the nails is described in the textbooks on diseases of the skin. The remedy consists in finding out the possible general or local condition which is responsible for the trouble and correcting it. As a matter of fact treatment is often not satisfactory.

Myopia

To the Editor:—A treatment for near-sightedness, or myopia, has been recommended to me by several persons. They believe that if one should close his eyes and face toward the sun for a short period each day the muscles of the eye would be strengthened by such treatment and in time glasses might be entirely discarded.

W. M., Minnesota.

Answer.—The inquirer has been misinformed. Much the same advice has been given in the newspapers in the last two or three years under such titles as "Throw Away Your Glasses," the idea being that by certain muscular exercises the error of refraction could be corrected. This notion is false.

One who has such an eye disease as myopia should consult a good oculist from time to time and wear the glasses he advises.

Cancer; Obesity

To the Editor:—1. Does a bad bruise on the chest cause one to have a cancer? How long would it take for a cancer to develop after getting such a hard blow on the chest? After one has had such a bruise can a physician tell within a few months if a cancer is developing, or would he have to wait until it was causing pain? Does it pain all the time and does it swell up? When one gets a hard blow on the chest and it stays red for quite a while what should he do? 2. Is it safe to reduce the bust by wearing some kind of reducing garment or is there any harm in reducing the bust?

E. F. B., Kansas.

Answer.—1. The question of how much an injury to the breast has to do with the production of cancer is an impossible one to answer. There is evidence that long continued irritation of a part like the breast may be a factor in the production of cancer. Whether or not a single blow may have any thing to do with it is much more uncertain. A physician cannot tell whether such an injury is to be followed by cancer, nor can he detect its development until a swelling appears. Pain is frequently absent in the early stages of cancer.

2. There is no local application or medicine to be taken internally that will reduce the size of the breasts. It would be best to consult a physician in regard to overweight.

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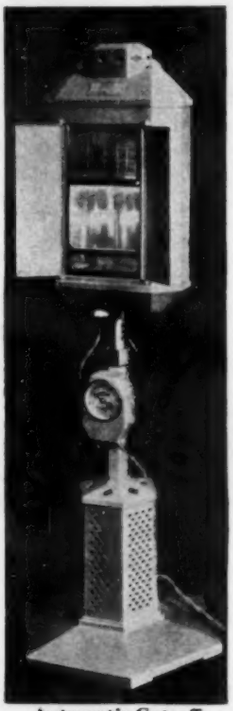

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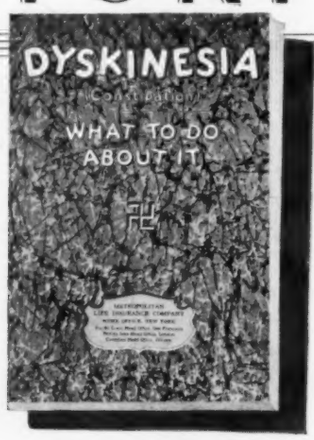

IF MISERY loves company, the person who has Dyskinesia [dis-kin-eés-ia] may be interested in learning from his family doctor that at least one in every three of his adult patients suffers from the same ailment. But he can take a good deal more comfort in knowing that Dyskinesia not only can be prevented but it can be cured—without resort to drugs.

Continued dependence on laxatives and cathartics, taken to relieve Dyskinesia, may be dangerous. They may bring temporary relief while causing great damage as time goes on.

Doctors attribute many serious troubles to Dyskinesia—colds, sick headaches, indigestion, dyspepsia, chronic inflammation of the intestines, in addition to "below-par-ness" in general. They also suspect it is responsible for certain disturbances of the gall-bladder, or of the kidneys, and for other disease conditions frequently associated with old age.

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Gum Chewing Habit

To the Editor:—Will you please tell me whether the following statement has any scientific basis? "The constant activity of the salivary glands induced by gum chewing, especially when flavored gum is chewed, exhausts the glands so that they lose their power to digest starch, a very important function which is necessary for good digestion. This has been proved by actual experiment. A man was made to chew gum constantly for several hours. At the end of the first hour there was a slight diminution in the digestive power of the saliva. At the end of two hours there was a very marked loss of digestive activity, and at the end of four hours when the experiment was terminated, the saliva had almost entirely lost its power. The thorough chewing of the food is essential to good digestion; but gum chewing is a useless and more or less harmful practice. The habit of gum chewing is likely to produce 'sour stomach' by interfering with the digestion of starch through the lessening of the activity of the saliva. Imperfectly digested starch absorbs the pepsin of the gastric juice and thus prevents the combination of the hydrochloric acid with the protein of the food. The large amount of hydrochloric acid left over in consequence gives rise to acid dyspepsia, or hyperchlorhydria, which in turn may produce gastric or duodenal ulcer. The so-called 'pepsin' and other flavored gums are especially harmful." L. O., Pennsylvania.

Answer.—Ptyalin, the starch-splitting enzyme present in human saliva, acts essentially only on cooked starches. Even herbivorous animals (goat, horse) have none and some carnivorous and omnivorous animals (rat, monkey, hog) that possess this enzyme in their saliva have no particular physiologic use for it, since they subsist solely on uncooked starches. Even in the human being, ptyalin acts on cooked starches only a short time, since its activity is rather promptly destroyed by the hydrochloric acid of the gastric juice. The amylopsin content of the pancreatic juice is sufficiently adequate to handle all the cooked and uncooked starches even in the absence of ptyalin action of human saliva.

Thorough chewing of food is certainly essential to its good digestion. Gum chewing may be a useless habit but it certainly is not harmful, even if during the course of salivary fatigue produced by chewing gum, the ptyalin content of human saliva diminishes. The practice will not produce any deleterious effects on the secretory ac-

(Continued on page 184)

Let This Mother Tell You Why She Gives Her Family Quaker Oats Breakfasts

And note how easily, how quickly this great health-breakfast is prepared. Just take hot water . . . Quick Quaker Oats..2½ minutes, and your steaming bowls of wholesome nourishment are deliciously done.

Children need the steady energy that Quaker Oats breakfasts give. Dorothy Engle, pictured above, starts every day with this nourishing hot breakfast.

"IT took a child's report card to make me realize the importance of breakfast. My family never made much of a meal of breakfast. And we seemed to be getting along all right.

"And then suddenly, I found we weren't! Our little girl was falling behind in her studies. The teacher said that along about ten o'clock in the morning she became restless, tired, unable to concentrate. This morning tiredness was exactly what my husband complained of. At the very time when he had the most work to do in the office, his energy began to lag.

"And then, one day, I read an article on the part the right breakfast plays in keeping the whole family up to par. From that day to this I've done my share by giving them the breakfast I know is best for all of them . . . good hot nourishing Quaker Oats."

Why nutritionists recommend Quaker Oats

No other breakfast is so urged by teachers, health workers and child experts. It has more to give your family because it's made only of the choicest, plumpest oats. These golden kernels are roasted through 14 different ovens till they're bursting with rich goodness. That's why only Quaker Oats has that luscious, nut-like flavor.

Fastest of all hot breakfasts

But perhaps you say "There's no time to cook oatmeal at our house." Here's the answer. Quick Quaker Oats cooks in less time than toast or coffee. Just whisk it into boiling water and in 2½ minutes it's deliciously done.

Serve these steaming bowls of tasty nourishment every morning. Start the whole family off with that lasting glow of energy that only Quaker Oats breakfasts give.

THE QUAKER OATS COMPANY
CHICAGO

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EXPOSED SKIN...need not be rough or coarse!

The skin on your sheltered body is fine and smooth, but *the skin that shows*—on hands and face—too often is coarse and rough.

Wind and weather, chemicals, soaps, powder and rouge, rob your exposed skin of substances necessary for smooth, healthy loveliness.

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(Continued from page 182)

tivities or digestive power of the stomach nor does protein digestion suffer.

Authorities differ on the causes of gastric and duodenal ulcers, but none would subscribe to the hypothesis that ulcer formation would result by the mechanism mentioned even if the gum was flavored or contained pepsin, for the pepsin content of so-called pepsin-containing gums is virtually nil.

Prostate Disease

To the Editor:—What percentage of patients are benefited by x-ray treatments for prostate gland trouble? W. D. C., Texas.

Answer.—The only proved benefit from x-ray treatment of prostate disease has come in some instances of cancer. Even in these cases there is considerable doubt in the minds of many close observers as to whether it is of definite value other than through its tendency in some instances to reduce pain. From time to time one hears of attempts by some enthusiastic roentgenologist to reduce benign prostatic enlargement by means of the x-rays. Many cases have been observed before and after such treatment and as far as can be determined clinically there is no change in the obstructing qualities of this tumor.

One may honestly say, then, that the x-rays have practically no place in the treatment of prostatic disease.

Trachoma

To the Editor:—What micro-organism is the specific cause of trachoma? What was the contribution of Noguchi on this subject? F. J. R., New York.

Answer.—The specific cause of trachoma has not been positively demonstrated. Four or five years ago Noguchi was able to obtain from trachomatous material in the eyelids of American Indians an active organism which he was able to grow at ordinary room temperature on leptospira medium and which he called *B. granulosis.* Inoculation of this bacillus in the conjunctival tissue of apes and monkeys caused the development of a definite follicular conjunctivitis which simulated closely the trachoma in human beings.

Finnoff and Thygeson have been able to duplicate Noguchi's experiments, while other workers abroad have not been successful in producing and reproducing the organism.

Reprints of articles dealing with the work of Noguchi and his followers may be obtained from the Rockefeller Institute, New York.

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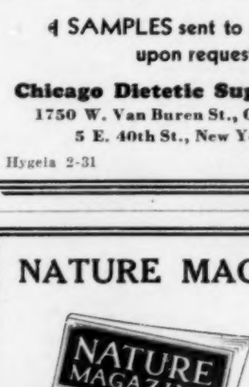

PRESENTS

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Open Water Closets

To the Editor:—My workmen are often required to work near open water closets, which emit a disagreeable odor, particularly during hot weather. Will you give me the name of some drug that will keep down the odor for a few hours or for a day or so?

F. E. C., Indiana.

Answer.—Chemicals, either solids or liquids, are used in water closet vaults for two purposes: as a fly repellent, and as a deodorant.

Ordinary freshly slacked lime or, better, chlorinated lime, has been used with some success, and sometimes commercial creosote compounds are employed. The final choice depends somewhat on cost and on the results desired. Satisfactory results are frequently not obtained because enough material is not used, or the deodorant is not sufficiently scattered so as to have contact with the surfaces of all the waste matter.

Use of Ultraviolet Rays for Sinus Trouble

To the Editor:—Will you kindly advise me whether or not ultraviolet rays have proved themselves of value for hay-fever and possibly for sinus trouble. Is there danger in their use for this purpose? My problem is whether to send my daughter to a physician who sometimes uses these rays (although I do not know whether or not he uses them for sinus trouble) or to send her to a man who, in case of sinus trouble, would puncture the wall of the sinus for medication and perform a conservative operation if necessary. She has not seen either of these physicians as yet, nor have they been consulted about her.

H. C. M., Washington.

Answer.—The secretary of the Council on Physical Therapy of the American Medical Association informs us that so far as he knows there is no evidence that the use of ultraviolet rays is of any special value in the treatment of sinus trouble. Claims have been made that the irradiation with a quartz applicator has a curative effect, but they are not substantiated by reliable evidence.

As to the washing out of the nasal sinus, that can often be done through the natural opening and that is always much to be preferred to the plan of puncturing the wall of the sinus, unless there is a distinct reason why the normal opening cannot be utilized for that purpose. It is impossible for us to advise as to which is the best plan in any specific case in the absence of a personal examination.

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This product is acceptable to the Council on Dental Therapeutics of the American Dental Association

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Spinach, Carrots, Asparagus, String Beans, Peas, Beets, Tomatoes, Prunes, Apricots and Applesauce.

Are all prepared from carefully selected materials, especially for growing babies and are immensely liked by them.

These are simply wholesome, healthful foods, packed for convenience and economy in 4 oz. glass jars.—Soups, also in 14 oz. jars.

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LETTERS FROM READERS

New York, N. Y.

To the Editor:

The article entitled "Growing Old Happily" in HYGEIA for October is interesting to us because we have a large group of hard of hearing old people. This is our special welfare group and it is our aim to see that they get as much happiness out of life as possible, that they have what hearing equipment they can make use of and that they get at least one hearty supper party during each month.

In reading the interesting and enjoyable article I have referred to I have been struck once again by the fact that otologists as well as the present author, Dr. Farr, and many general practitioners of our acquaintance seem unable to realize that hard of hearing old people can use an electric hearing aid comparatively seldom. Senile deafness usually requires a hearing tube or some other nonelectrical appliance and in many cases even that is not successful. Dr. Farr says that a certain number of persons by use of artificial aids but more particularly by increased attention and cultivation of lip-reading can almost completely compensate for loss of hearing. We find that old people can rarely cultivate increased attention for the simple reason that arteries are old and brain centers are frequently undernourished. This same fact covers the cultivation of lip-reading, which requires freshness of attention. Sometimes old people do very well in lip-reading classes and again they sit in the front row wrestling with their feeble eyesight and depleted power of attention until their eyelids droop and they almost go to sleep.

If I may venture to make a suggestion I should say that increased attention should be given by the friends of the aged hard of hearing so that they need not be left out of family conversations or permitted to sink into the bitter, depressed states we have all observed. There is nothing so lonely or so neglected as the hard of hearing old man or woman. They are entitled to be petted a little by their younger and more vigorous friends, even though they are frequently cantankerous to a degree.

I never read HYGEIA without appreciating its splendid type faces. Wishing the magazine an ever increasing success, I am,

Sincerely yours,

ANNETTA W. PECK,
Executive Secretary,
New York League for the Hard of Hearing.

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Guards ingeniously constructed of one piece of German Silver Wire. No ends to loosen, to injure the face or eyes. *Used for fingers also.*

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Complete instructions with guard.

Price, $1.75 per pair, postage prepaid. State age of child when ordering guards. Satisfaction Guaranteed.

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Dallas	WRR
Fort Wayne	WOWO
Indianapolis	WFBM
Kansas City	KMBC
Memphis	WREC
Milwaukee	WISN
*Minneapolis	WCCO
Nashville	WLAC
New Orleans	WDSU
Omaha	KOIL
St. Louis	KMOX
San Antonio	KTSA
Sioux City	KSCJ
Topeka	WIBW

6:00-6:15 P. M. (M.S.T.)

Denver	KLZ
Salt Lake City	KDYL

5:00-5:15 P. M. (P.S.T.)

Los Angeles	KHJ
Portland	KOIN
San Francisco	KFRC
Seattle	KOL
Spokane	KFPY
Tacoma	KVI

The stations listed have ***been*** *secured to broadcast the early programs of this series. Since the talks will continue throughout 1931, it may be possible to add other stations to the coast-to-coast network.*

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"GIVE him a good dose of castor oil and he'll be alright by tomorrow."

It was easy enough for the doctor to say that—he didn't have to *give* Bobby the oil! Bobby is only six, but he could put up the battle of six marines against castor oil.

So I replied, "All right, Doctor, just wait here. I'll get the oil and *you* give it to Bobby." When I handed him the bottle he just looked. "Why," he said, "no wonder the child objects—you're still giving him the old-fashioned stuff. Castor oil today is made *tasteless!* Send out for a bottle of Kellogg's Tasteless" . . .

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Do not let anyone give you so-called "tasteless" castor oil bought in bulk and put up in his own bottles. This tasteless castor oil to retain its tasteless character and freshness, is bottled and sealed immediately upon refining *at the refinery.* Kellogg's is pure, fresh castor oil with the castor oil taste removed by super-refining. It comes to you in the original *refinery-sealed* bottle. Look for the label, the sealed top and the Good Housekeeping Star on the outer carton.

BETTY

TEST IT—FIRST

Prove to yourself and children the easy-to-take character of Kellogg's Tasteless Castor Oil. The coupon and 10c brings you a generous trial bottle postpaid.

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Enclosed find 10 cents. Please mail trial bottle of Kellogg's Tasteless Castor Oil.

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THE WORLD'S PUREST CASTOR OIL

Cambridge, Mass.

To the Editor:

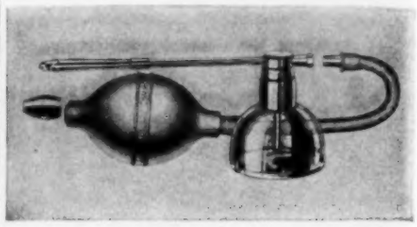
I was distressed to see that Dr. Evans (The Story of Anesthesia, HYGEIA, November, 1930, p. 1014) makes certain inaccurate statements about Dr. W. T. G. Morton in connection with the discovery of ether.

Dr. Edward W. Emerson, son of Ralph Waldo Emerson, wrote in the *Atlantic Monthly* for November, 1896, "A History of the Gift of Painless Surgery," giving an account of the respective claims of Dr. Charles T. Jackson and Dr. Morton to this discovery. This was reprinted in pamphlet form by Houghton, Mifflin & Company, and gives a somewhat lengthy bibliography of the writings on this controversy. I will not rehearse the evidence, but will simply correct a few of the statements in Dr. Evans' article.

In 1844 and 1845, Mr. Morton was not a student at Harvard University from which he never received, nor, I believe, sought a degree. (See Quinquennial Catalog.) He was studying medicine in the office of Dr. Charles T. Jackson, who was a physician and a graduate of the Harvard Medical School but who was devoting himself more and more to chemistry and general science. In 1842, Dr. Jackson had experimented on himself with sulphuric ether, producing a somewhat prolonged unconsciousness. This fact he communicated to a number of his friends and spoke of it freely to Dr. Morton at the time when the latter was living in his house and studying with him. In September, 1846, Dr. Jackson encouraged Dr. Morton to give sulphuric ether during the extraction of a tooth and explained how it should be done, and on the following day told him that he must now persuade the surgeons at the hospital to let him administer it during a surgical operation.

It seems to have been at this stage that it occurred to Dr. Morton that he might claim the whole credit and turn the discovery to great pecuniary advantage, a most unfortunate yielding to temptation, for if he had been contented with his own share of the credit for the energy and courage in putting the thing through, his name would have been truly honored instead of being long held in contempt by such men as Dr. Morrill Wyman; my father, Dr. Samuel Cabot, and all of their colleagues who were in a position to know the facts.

Hence it is not surprising that Dr. Morton's name does not appear on the monument in the Boston Public Garden, of which you give an excellent picture, but incorrectly describe as a monument to



FIGHT INFECTION

Ask Your Doctor

To fight infection in the nose and throat passages your physician may want you to spray several times daily with an approved spray solution. Remember that the medical profession for 42 years has prescribed DeVilbiss Atomizers for this purpose. At all druggists.

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Humidified air prevents many of those colds baby has due to dry heat in your home What you need is a

BUDDINGTON "THE WICK DOES THE TRICK" HUMIDIFIER

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Buddington Humidifiers range in price from $2.75 up. Write for leaflet giving complete information.

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418 N. Monticello Ave.
CHICAGO

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"Publications Dealing with Medical Subjects of Interest to the Public"

American Medical Association, 535 N. Dearborn St., Chicago

Morton. As this description would, I fear, cause Mr. Thomas Lee, the donor, to turn in his grave, does it not seem reasonable and proper to correct the mistake?

The accounts of Dr. Jackson's interviews with Dr. Morton are confirmed by affidavits of gentlemen present in his laboratory, and it seems impossible to believe in Dr. Morton's good faith, when he never mentioned Dr. Jackson's name to the surgeons at the hospital and did not even invite him to the operation.

I am sorry to say that this is the second time that Dr. Morton has been given credit for this discovery in your magazine without even mention of Dr. Jackson's name, who was, as Dr. Wyman said, the head where Dr. Morton was the hand.

Sincerely yours,
HELEN CABOT ALMY,
Cambridge, Mass.

New York, N. Y.

To the Editor:

With reference to the paper written by Mrs. Ines Stearns Macaulay (How Clean Is Your Town? HYGEIA, October, 1930, p. 618), I believe one of the observations of Dr. George Soper is not quite correct.

Although it is gratifying to me to learn in your article that my home town, Munich, is the cleanest city in the world, I do not agree with Dr. Soper that the system of refuse collection is new; at least in Munich we have had this system of collection—leasing covered and specially made house cans by the city and collecting the refuse in special covered cars with provisions so that only so much of the cover is removed as is necessary to empty out the dust can—for at least twenty-five years.

During the early days, of course, the cars were driven by horses, and some of them had little hoists that made it easier for the dust collectors. I remember well how we as little school boys watched with awe the hoisting up of the refuse cans and the disappearance of all the dirty stuff without the least amount of dirt being spread around.

Very truly yours,
KARL A. MAYR.

MINNEAPOLIS DOCTOR NOW HEADS CONFERENCE

Dr. W. J. Marcley of Minneapolis, one of the founders of the National Tuberculosis Association, is the new president of the Mississippi Valley Tuberculosis Conference. Dr. E. A. Meyerding, St. Paul, of the United States Veterans' Hospital at Fort Snelling, is the new vice president of the organization.

Ted's health and schoolwork *both* improved

—*thanks to this* FREE *"Clean Hands" game*

ALL "Excellents" and "Goods" on his report card; an almost perfect Wash-up Chart. Two fine records for Master Ted. And one helped boost the other.

Since Ted started playing the Lifebuoy "Clean Hands" game, he hasn't had a single cold. Hasn't had to stay home from school a day. So of course his marks went up. Everyone's delighted!

A health game that's good fun

No wonder health improves when youngsters play the Lifebuoy "Clean Hands" game. They want to wash hands oftener. It's such fun to keep score.

And with Lifebuoy's creamy, antiseptic lather they get *germs* off hands as well as dirt—germs which the Life Extension Institute tells us may spread 27 diseases.

Pictures on the chart show children how hands pick up germs from books, shoes, pets, doorknobs. Other pictures show how to work up a rich, sudsy Lifebuoy lather.

Complexion care for mothers

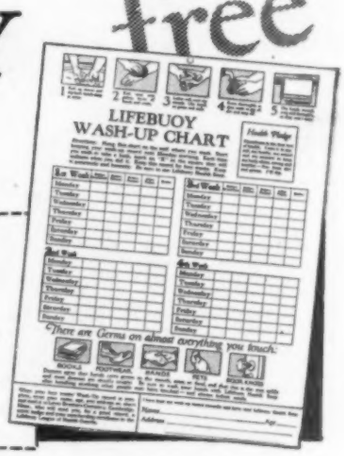
This same gentle, purifying lather keeps complexions satin-smooth, clear—radiant! Prevents embarrassing body odor, too. Its fresh, *extra-clean* scent that vanishes as you rinse—tells you Lifebuoy is a *real health safeguard.*

Free to mothers

Mothers, fill out and mail coupon below for free Wash-up Chart and trial size cake of Lifebuoy for each of your children. You'll enjoy the game from the sidelines—no more scolding to get hands washed.

LIFEBUOY
HEALTH SOAP
for face, hands, bath

free



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285 Pink Mesh	2.00
280 Pink Silk Jersey	3.50
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"Ovr-Nite" Reg. U.S.P.O. HEATING PAD

Stays Hot 15 Hours

Prepared with 1 oz. of hot water

The "Ovr-Nite" Heating Pad is invaluable wherever heat applications will relieve pain or congestion, as in toothache, neuralgia, neuritis, lumbago, menstruation; also for keeping hot compresses hot, and for the infant's crib. Ready for use almost immediately on addition of water. Retains temperature of 170° to 175° for fourteen hours. Can be cooled at will. Soft, pliable, no possibilty of leakage. Life of each pad guaranteed to be 105 hours. Does not deteriorate with age; lasts until consumed by actual use.

Two pads with washable rubberized cloth cover, $1.40 prepaid

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DRS. MINOT AND WHIPPLE RECEIVE SCIENCE AWARD

Dr. George R. Minot, professor of medicine, Harvard University Medical School and Dr. George H. Whipple, dean and professor of pathology, University of Rochester School of Medicine and Dentistry, have received jointly the first $10,000 award inaugurated by Popular Science Monthly for the current achievement in science of the greatest benefit to the public, in recognition of their work on the use of liver as a treatment for pernicious anemia.

The presentation of $5,000 and a gold medal to each was made, December 18, at a dinner in New York City. Dr. Whipple, through experiments on animals begun in 1917, discovered that a liver diet brought about the production of red blood cells. Working independently, Dr. Minot studied the effect of diet in pernicious anemia. When the results of Whipple's experiments were announced in 1924, Dr. Minot, with his associate, Dr. William P. Murphy, tried out a diet of liver for patients with pernicious anemia. In 1926, Dr. Minot announced that forty-five patients, treated by him and Dr. Murphy with the liver diet, had recovered. Dr. Minot and his associates have since isolated the active principle of liver and prepared it in powdered form.

Dr. Minot was graduated from Harvard University Medical School in 1912, and has been a member of the teaching staff since 1915. Dr. Whipple was graduated from Johns Hopkins University School of Medicine in 1905. He was resident pathologist at Johns Hopkins Hospital from 1910 to 1914; professor of research medicine and director of the Hooper Foundation of the University of California from 1914 to 1921, and has been dean at Rochester since 1921.

HOME ACCIDENTS CAUSE MANY DEATHS

Accidents in the home are responsible for the largest number of accidental deaths next to the number caused by automobiles, reports the National Safety Council of America. One fourth of the 100,000 accidents in 1929 were caused by burns, falls, cuts and poisons in the home.

Among the causes are listed: loose rugs; toys on the stairs; dark stairways; pins, needles, and other sharp objects on the floor; medicines left in reach of children; open fireplaces; closed garage doors when automobiles were running, and ice on the sidewalk.

STOP
Thumb-Sucking
JUBILEE BABY ARMLET
Aluminum—Adjustable
$1.00 Pair
Also corrects Nail-Biting

A safe, easy, kindly way. Invaluable if suffering from Eczema or other skin disease. Allows free movement, even considerable bending of elbow. Loose fitting, light, sanitary, cool. Snap fasteners, adjust to 5 different sizes. Handy. At drug or surgical supply houses, or postpaid on receipt of $1. If more convenient, order C.O.D. and pay postman $1.10 on delivery.

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SAFETY PLAYS STORIES POSTERS RHYMES LESSONS

A wealth of material for teachers and pupils

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NUTRITIONIST OUTLINES BUDGET FOR ECONOMY

A weekly budget for use of mothers during these times of lowered incomes and unemployment has been outlined by the Philadelphia Child Health Society. The budget is dietetically sound, though it lacks variety. For a family of five the total weekly cost is $8.59, according to the current prices of foods in Philadelphia.

Food	Amount
Fresh milk, grade B	14 qts.
Evaporated milk, 16 oz. can	7 cans
American cheese or cottage cheese	½ lb. or 1 lb.
Eggs, storage	1 doz.
Meat, neck, chuck or other stewing cuts, beef or pork, liver, ends of ham	3 lbs.
Fish, tall cans of salmon, dried herring, flounder	1 to 2 lbs.
Beans, peas or lentils, dried	2 lbs.
Potatoes, white	20 to 25 lbs.
Tomatoes, canned	3 cans
Cabbage, spinach, endive, kale	5 lbs.
Carrots, turnips, onions, other roots	10 lbs.
Oranges, bananas or apples	1½ to 2 doz.
Dried fruits, raisins, prunes, figs	2 to 3 lbs.
Bread, white or rye	10 lbs.
Bread, whole wheat	4 lbs.
Oatmeal, cornmeal, macaroni, rice	3 lbs.
Butter substitute, oleo, lard, salt pork, cooking oil	3 lbs.
Sugar, white	3 lbs.
Molasses, loose	½ lb.
Cocoa, loose	¼ lb.
Tea or coffee	1 lb. coffee for 2 weeks
Salt, other flavorings	¼ lb. tea for 2 weeks

Mothers are urged to buy in quantity rather than in small amounts, and to buy at stores in which the prices are the cheapest in the neighborhood. Perishable foods are often cheaper at the end of the day or on Saturday nights.

The diet is not recommended unless there is need for economy in the family, because it lacks the variety to make it particularly desirable. The amount of milk in the diet should be increased with the decrease in the amount of money that one has to spend, the society suggests. Milk is necessary for growing children, and it protects the health of adults in many ways. It is advisable to buy the cheaper day-old bread at the bakery.

PHYSICAL PERFECTION PRECEDES ART

"The basis for a sound education for leisure is physical culture, and the final object of it is art. A long line connects the two things—the basis, the beginning, and the end. You have to travel a long way before you get from the physical culture to art, but if you want to get to art, the point to start is a sound cultural body."—*Dr. L. P. Jacks, Oxford University, England.*

policemen that

Never Sleep

. . . they protect your child's health 24 hours of the day

DAY AND NIGHT, you watch your child's health. Every hour is a victory over disease, a period of growth, of increasing strength, of greater vitality. Every hour he should be protected by the vitamins.

Is he underweight, or small for his years? Does he lack appetite? His meals may lack Vitamin B.

Vitamin B acts as a policeman who protects your child's appetite. When he goes off the beat, stunted growth results. Deficiencies in other vitamins bring on rickets, scurvy, colds and other children's diseases.

Today, you have a dependable source of vitamins in Maltine With Cod Liver Oil. 70% is Maltine itself, a concentrated extract of malted barley, wheat and oats—rich in the vital Vitamin B. The remaining 30% is vitamin-tested cod liver oil (Vitamins A and D). Taken in orange juice in adequate dosage (Vitamin C) this preparation *provides a sufficient quantity of all four vitamins* (A, B, C, D) *to promote health.*

Keep a bottle in the kitchen cabinet, and stir it into the child's orange juice. Children readily take it and love its honey-like taste.

Every mother should read the booklet, "The Doctor Talks About Vitamins." May we send you a free copy? The Maltine Company, 20 Vesey Street, New York City. Established 1875.

The A B C's of Vitamins

A "OFFICER A" *is essential to normal growth and helps protect against certain infections, especially those that attack the respiratory system. Maltine With Cod Liver Oil is a recognized rich source of Vitamin A.*

B "OFFICER B" *is most essential. Lack of Vitamin B results in loss of appetite, a cessation of growth, and the appearance of certain nervous disorders. Vitamin B (the Maltine vitamin) is found in abundance in Maltine With Cod Liver Oil.*

C "OFFICER C" *prevents scurvy. Orange juice is everywhere recognized as very rich in Vitamin C. That's why we recommend this policeman.*

D "OFFICER D" *is also necessary. A deficiency of Vitamin D causes rickets, that weakener of child bones. Sound teeth depend upon it. It is meager or lacking in all our ordinary foods. Maltine With Cod Liver Oil is rich in Vitamin D.*

On the RADIO
The Maltine Story Hour
every Monday afternoon at 5 o'clock (Eastern standard time) on coast-to-coast hook-up over WJZ and associated stations of the N. B. C.

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WITH COD LIVER OIL

Accepted by the Council on Pharmacy and Chemistry of the American Medical Association

INTRODUCING

Dr. Darby's New ANTI-THUMB-SUCKING DEVICE

ITS smooth peculiarly shaped metal studs break the suction. Habit is quickly and effectively ended. Adjusts to thumb or finger of any sized child. Held in place by means of adhesive tape which in older children is covered with cloth tape and then sewed together. Allows use of end of thumb and need not be removed while playing or eating.

Thousands already in use.

Satisfaction guaranteed or money refunded.

Price per pair $2.00

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SOFT, luxurious, lustrous hair and healthy scalps! That is what DERBAC means to thousands of families in this country and Europe.

DERBAC, the *only shampoo especially for children* (equally good for grown-ups) is enthusiastically approved by Boards of Health and Education. 20 shampoos for 25 cents. At your druggist.

FREE—Amusing booklet to interest Children in Hair Care. Mail Coupon.

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Please send free copy of "Funny Booklet."

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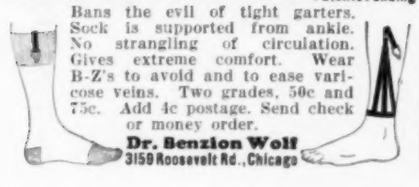

Bans the evil of tight garters. Sock is supported from ankle. No strangling of circulation. Gives extreme comfort. Wear B-Z's to avoid and to ease varicose veins. Two grades, 50c and 75c. Add 4c postage. Send check or money order.

Dr. Benzion Wolf
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PRENATAL CLINIC REDUCES MATERNAL DEATH RATE

Maternal morbidity in a group of 4,726 women given prenatal care by the Maternity Center Association of New York, between 1922 and 1929, was 2.4 per thousand births, or one third of the rate among other women of the same neighborhood, according to a study published by Louis I. Dublin and Hazel Corbin in the *American Journal of Obstetrics and Gynecology*.

The Maternity Center Association encourages women who cannot afford private medical care during pregnancy to register at the clinic during the early months to receive instruction in hygiene and preparation for and care of the baby. An examination is made and arrangements are made for either hospital or home delivery. If the women cannot have a private doctor for the delivery, one is supplied by the association.

Eighty-five per cent of the women cared for by the association had registered before the seventh month of pregnancy; 28 per cent came before the fifth month and 2 per cent waited until the ninth month before they sought prenatal care.

No woman in the group died before delivery. Thirteen died shortly after the child was born but only eleven of these deaths were from complications owing to pregnancy. Of the 4,596 live infants born, only 132 died before they reached the age of one month. There were 274 premature infants, 61 of which were due to miscarriages, and 123 stillbirths.

The rate for stillbirths was lower than the average for the city of New York, which is fifty per thousand births. The rate for the other women of the neighborhood was 42 per cent higher.

If the same type of prenatal service were rendered universally with similar results, the lives of 10,000 women who die annually in childbirth would be saved and the deaths of 30,000 infants would be prevented, it is declared.

CONTEST STIRS INTEREST IN HEALTH

Texas girls competing in the state clothing contest must watch their health as well as their sewing. No girl can win honors merely because she exhibits the best garment; she must also have health and good posture.

The Texas plan has motivated the health activities of the school girls throughout the year. Girls all over the state look forward to the event with interest, meanwhile acquiring proper health habits.

Mother, keep your baby safe

from loose pins and buttons

Vanta*

Baby Garments

No Pins No Buttons

READY for my Vantas,* mother! No pins or buttons for me. Just cute little bows of twistless tape that fasten so safely and always just right. You never turn me over once while dressing. I can always look up into your face. Don't we love to smile and laugh together!

USE Vanta* No-Pins-No-Buttons from birth to two years, then Vanta* Self Help Garments that make it easy to teach babies to dress themselves, saving mothers' time and training babies' minds. Silk, wool, linen, sase, rayon, cotton knitted fabrics. Vanta* Garments and Hosiery are guaranteed non-shrinkable.

Ask your store for the original Vanta* Garments. If you cannot get them write EARNSHAW KNITTING CO., Dept. 1000, Newton, Mass. In Canada, write to J. R. Moodie Co., Ltd., Hamilton, Ont.

* Vanta—Trade Mark Reg. U.S. Pat. Off.

FREE TO YOU

Vanta Pattern, also "Baby's Outfit," a book of 64 pages on care and dressing of babies.

Earnshaw Sales Co., Inc.
Dept. 1000, Newton, Mass.

Without charge now or later send pattern and full instructions for making the new Vanta* square-fold, pinless diaper. Also Baby's Outfit book and illustrated catalog all in plain envelope.

Name.....

Address.....

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DR. KARL LANDSTEINER WINS NOBEL AWARD

Dr. Karl Landsteiner, the man who discovered and classified the different types of human blood, has been awarded the 1930 Nobel prize in medicine. The award carries with it a cash prize of $48,000. The discovery that was to make Dr. Landsteiner famous was made in 1900. It formed the nucleus for further advances in the art of blood transfusion and in the identification of blood for legal purposes.

Dr. Landsteiner is by birth an Austrian. He was born in Vienna on June 14, 1868, and obtained a degree in medicine at the University of Vienna. Since 1922 he has been associated with the Rockefeller Institute for Medical Research in New York.

It was Dr. Landsteiner who first infected monkeys with the germ of infantile paralysis, thus producing a serum for use in inoculation of patients with the disease. Dr. Landsteiner's studies on the blood groups were published in 1925 in collaboration with Dr. C. P. Miller. The experiments were carried out on the blood of men, monkeys and apes. The outcome supported the belief of biologists that men, monkeys and apes have all sprung from a common source.

This is the second time that the Nobel prize in medicine has come to the United States. It was awarded to Dr. Alexis Carrel in 1922.

PREVENTABLE ACCIDENTS ARE CAUSED BY SPORTS

Although winter sports are among the cleanest and healthiest forms of recreation, they bring many fatal accidents to children each year. Skating while the ice is thin and coasting on hills where there is automobile traffic cause the greater part of the accidents, warns the National Safety Council.

When one person tests the strength of ice, it should be remembered that the strain is increased by each additional person. Ice should be at least 2 inches thick before skating is attempted. Many municipalities rope off streets for the exclusive use of coasters; coasting on streets with automobile traffic should be prohibited.

AIR SERVICE HAS NURSES

Nurses are pioneering in the air service. The Boeing Air Transport Lines, Inc., has decided to take trained nurses to serve as hostesses on board its passenger planes flying in the Far West and along the Pacific coast. The nurses are attired in attractive aviation uniforms.

You can't wear gloves on your Lips—

BUT they need protection just the same. The comparison, illustrated below, of the skin of lip and palm will show you just why. The protective granular layer is absent from the lip covering—science has not stressed that before, although Cleopatra may have known it, since she was the first to prepare and use lip pomade.

The skin of the lip

Note lack of granular cells between tissues, and thin outer covering.

Roger & Gallet Lip Pomade assures this necessary protection under any exposure to light, heat, cold or wind. Pure, colorless, pleasant, it has been used in America since 1883. Physicians advise it for chapped or fevered lips. It is especially advised for children—women find it a splendid protection foundation for colored lipsticks. Your druggist supplies a convenient liberal stock for a quarter.

The skin of the palm

This shows deep granular layer between tissues, and thick outer skin.

ROGER & GALLET *Lip Pomade* 25c

If any crack, spot or lump on your lips persists, see your physician — don't attempt to treat it yourself.

ROGER & GALLET, Dept. H.1, 1071 Sixth Ave., N. Y. C.

Kindly send me free of charge trial package of Roger & Gallet Lip Pomade with comparison of lip and palm.

*Name*_____

*Address*_____

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NO man or woman should permit armpit perspiration with its disagreeable, offensive odor and ruinous, discoloring stains to embarrass them personally nor destroy their clothing.

You can rid yourself of armpit perspiration. A few drops of NONSPI (an antiseptic liquid) applied to the underarms will keep them dry, odorless and sweet and protect your clothing.

NONSPI destroys the odor and diverts the underarm perspiration to parts of the body where there is better evaporation—and need be used on an average of but two nights each week.

NONSPI is an old, tried and proven, dependable preparation—used, endorsed and recommended by physicians and nurses.

More than a million men and women use NONSPI the year around—spring, summer, fall, and winter—to keep their armpits dry and odorless and protect their clothing.

Get a bottle of NONSPI today. Use it tonight. Your Toilet Goods Dealer and Druggist has it at 50c (several months' supply) or if you prefer

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STREET_____

CITY_____

CARBON MONOXIDE GAS ENDANGERS MANY LIVES

Danger of poisoning by carbon monoxide is prevalent at this time of the year. Whether a person drives an automobile or is a passenger, or whether he works in a garage or merely lives in a house using gas appliances, he should be constantly aware of the danger.

Carbon monoxide creeps on a person without warning. It has neither color nor odor. As soon as it reaches the lungs, it proceeds to displace the oxygen in the body. The victim may sense a muscular weakness. But if he tries to move, he requires more oxygen than remains in the lungs, and he falls prostrate. Unless resuscitation is undertaken almost immediately, there is no chance of saving the life of the victim.

The United States Bureau of Mines has issued a moving picture depicting "The Unseen Danger." The picture is being sent to organizations throughout the country in an attempt to warn people.

Here are a few precautions:

Be sure that the garage door is open when the car is running; it may blow shut.

Stop the engine before getting under the car to do repair work.

Turn off all gas appliances when sleeping; the fire may go out leaving the gas to fill the room.

Gas connections should be leak proof. Rubber hose soon wears out and leaks.

Gas appliances should have outside vents to eliminate the unburned gas that escapes from the burner while the fire is on.

WINDOWLESS FACTORY HAS AMPLE LIGHT

Mellow electric lights and air controls will take the place of windows in a factory soon to be built by the Simonds Saw Industries at Fitchburg, Mass. The building will be a one story structure covering five acres.

There will be no skylights, yet behind the heavy sound-absorbing walls there will be light superior to sunlight in that it will be evenly distributed and will be uniform from day to day. There will be no drafts through window cracks.

All machinery will be painted a brilliant orange as a part of the accident prevention program. Cork pads will be placed beneath the machines to reduce the noise.

Thirty million dollars has been appropriated in New York City for 3,550 acres of new parks and 175 new playgrounds.

CHICAGO FAR HEALTHIER THAN IN 1899

Health in Chicago in 1899 was a far different thing than it is today. Even though the population has more than doubled in the last thirty years, figures show that there were only 21 deaths from typhoid fever in 1929, as compared to 636 in 1899; 78 deaths from scarlet fever as compared with 533; 450 of diphtheria as compared with 917, and 2,600 deaths from tuberculosis as compared with 2,829, according to Health Commissioner Kegel.

The drainage canal carrying the sewage away from the city to disposal plants rather than dumping it into Lake Michigan has been a strong factor in eliminating disease from Chicago. The milk and water supplies have been constantly improved in the last thirty years.

ARTIST BEGAN CAREER AS CRIPPLED CHILD

When Alexander Brook, the artist, was convalescing from an attack of infantile paralysis at the age of 12, a neighbor brought him a set of paints. The neighbor was an artist himself and he spent much time in teaching the boy to paint.

A few weeks ago, Alexander Brook was awarded the second prize at the annual Carnegie International Exhibition in Pittsburgh for his painting "Interior." Last year his painting "Children's Lunch" won the gold medal at the Chicago Art Institute.

BOY SCOUTS TO CELEBRATE 21st BIRTHDAY

The Boy Scouts of America will celebrate their twenty-first birthday on February 8. It is estimated that five million persons have been associated with the organization since its founding. Last year there were 608,655 members on the roll after the organization had been extended to include a Cub group of boys from the ages of 8 to 11.

The week following the birthday will be a contact week for all scouts and former scouts.

PORTO RICAN CHILDREN TAUGHT TO GARDEN

School children in Porto Rico are encouraged to have gardens at home where they can cultivate vegetables. Each rural school is surrounded by a small farm cultivated under the direction of a practical farmer. This project is a part of the reconstruction plan of Governor Roosevelt following the recent hurricane disaster which brought poverty and pestilence.

Mothers!..do you know the advantages of KLEENEX disposable handkerchiefs?

Health authorities are advocating Kleenex. Many schools are teaching its use. Modern homes are adopting Kleenex for adults and children alike.

USED just once, when there's a cold, a handkerchief is filled with infectious germs. Why carry it to your face time after time, to irritate, to re-infect? Why not destroy it?

That's exactly what you do with Kleenex. You use it once—then discard forever.

Perfect for children

Children are careless. You know that. Careless of themselves and others. They lose handkerchiefs. Use them until they are impossibly damp and dirty. Fail to wash their hands before eating—the hands that have clutched a germ-filled handkerchief. Then parents wonder why colds "hang on." Why a cold always seems to "go right through the family."

Try Kleenex this winter. See how the family takes to it. See how much laundry is saved.

Other uses

Once installed in your home, Kleenex will become a household necessity. It's astonishing, the uses that develop for these delicate, gentle tissues!

Beauty experts, you know, advise Kleenex for removing creams and cosmetics from the face. Kleenex saves towels from stains and saves your face from improper cleansing. It lifts up every trace of dirt and powder along with cleansing cream. Ask for Kleenex at any drug, dry goods or department store.

KLEENEX
Cleansing Tissues

PREVENT RE-INFECTION

It's unfair to let children re-infect themselves time after time from a soiled, germ-filled handkerchief. Teach them the use of hygienic Kleenex, which is used once, then discarded.

FREE TRIAL PACKAGE

HY-2

KLEENEX COMPANY, Lake Michigan Building, Chicago, Ill. Please send me a week's supply of Kleenex free of charge.

*Name*_____

*Street*_____

*City*_____ *State*_____

When the Antiseptic fails. . .

When an antiseptic is prescribed for a patient, bought at the corner drug store and then fails to perform satisfactorily, the reflection falls on the physician who prescribed it and not on the corner druggist who supplied it.

That's just one of the many important reasons why you should use and prescribe Iodine! As innumerable case histories prove, Iodine has demonstrated great penetrative ability and high germicidal potency—these are the very reasons why Iodine has held and continues to hold a leading place in the antiseptic field.

Nothing Takes the Place of IODINE

IODINE EDUCATIONAL BUREAU

64 WATER STREET : : NEW YORK, N. Y.

CHILDHOOD TUBERCULOSIS IS FREQUENT, SURVEY SHOWS

Of 5,451 children in Hennepin county schools, Minnesota, who were recently given tests for tuberculosis, 9.4 per cent had a positive reaction. Of these, 6.4 per cent definitely had childhood tuberculosis and were referred to preventoriums or were given treatment at home.

Other defects found in the children during the three year survey, made by the county tuberculosis association, were poor posture, 28 per cent; defects in nose and pharynx, 19.2 per cent; diseased tonsils, 28.4 per cent, and faulty vision, 7.2 per cent. Twelve per cent were underweight. In each case parents were notified of the defects and treatment was advised.

NEWER METHODS LESSEN DANGERS OF MERCURY

Improvement in the process used in the manufacture of thermometers has eliminated serious dangers to health by mercury poisoning, according to a recent survey made by the state department of labor in New York.

The old method of filling the thermometers with mercury by an open process, allowing the vapors to escape in a room filled with workers, was a health hazard, especially since mercury evaporates at the temperature that freezes water. The method employed today, with the exception of that in a few small shops, is one of filling the thermometers by a vacuum jar, permitting no vapor to escape.

DR. C. W. HINCKS DIRECTS MENTAL HYGIENE GROUP

Dr. C. W. Hincks, founder and former medical director of the Canadian National Committee for Mental Hygiene is the successor to Dr. Frankwood E. Williams, who is retiring as medical director of the National Committee for Mental Hygiene.

Dr. Williams has been director of the committee for eight years. He was previously with the committee as associate director for six years. The committee celebrated its twenty-first birthday on November 13, in New York.

The extent and significance of mental disease in the United States can be judged in part by the fact that at least one half of the approximately 800,000 hospital beds are set aside for the mentally ill.—William E. Sandy in *Mental Diseases.*

BUREAU ISSUES PAMPHLET ON PRENATAL CARE

After more than two million pamphlets describing prenatal care have been distributed by one organization alone, the Children's Bureau of the United States Department of Labor, in the last seventeen years, doctors are still getting inquiries as to whether or not a fright of the prospective mother is liable to affect the child.

A new pamphlet prepared by a staff of gynecologists has been issued by the department, describing in detail the relation of the nervous system of the mother to the child, and pointing out that frights will not mark the child. This pamphlet is designed especially for mothers who do not have medical aid close at hand.

ONLY FEMALE MOSQUITOES SUCK HUMAN BLOOD

Just one half of the mosquito world thrives on human blood. That is the feminine half. Male mosquitoes live on plant juice, which seems to be their natural food, two Russian scientists, Dr. M. Kadletz and Dr. L. Kusmina, have shown by recent experiments.

Habitats of mosquitoes are many and varied. Of the 1,500 varieties, there are 131 varieties in the United States. Some frequent only large bodies of water; others haunt stagnant pools or pockets of water in hollow trees. Still others thrive in ice water, as the variety breeding in snow-margined pools on Mt. Rainier, Wash. Some breed in oases of the Sahara and others remain in damp houses.

CHILD'S DIET MAY BE UNDERESTIMATED

Diets for school children are likely to underestimate the requirements because they are calculated on the basis of the requirements of adults, says Dr. W. F. Thompson in the *Texas Outlook*. A healthy boy of 15 requires about 3,000 calories a day, which is equal to the amount required by a full-grown farm hand. A 14 year old girl requires more calories per pound body weight than her mother.

After carefully watching the diet of the school child, it is important to have such temptations as hot dogs, cheap candies and tamales removed from the vicinity of the school.

The good health and protection of childhood is fundamental to national welfare, and the march forward of our country must be on the feet of children.

—*Herbert Hoover.*

How to help THESE PEOPLE

understand the value of cleanliness

On one point most health workers will agree: an important lesson in health education is cleanliness. In many homes cleanliness is the starting point . . . the basis upon which to build.

But, often the people who need the knowledge most, understand the least—are much, much the more difficult to teach.

To tell the story of cleanliness simply, Cleanliness Institute Health Service has prepared a number of publications. All of them are intended to suggest new methods of presenting scientific facts in easily understandable terms. Our regular staff, in the preparation of this literature, has been assisted by trained workers in the fields of public health, writing and teaching.

These booklets and leaflets cover a wide range on the subject of cleanliness and health. All of them are briefly described in our most recent booklet, *Better Health Through Cleanliness.*

We invite all doctors, nurses and health workers to send for this new catalogue of literature prepared for their use.

Remember it is free—as are review copies of most of the publications it describes. Use the coupon.

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Please send me free of all cost a copy of "Better Health Through Cleanliness."

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RARE OR UNCOOKED MEATS MAY CAUSE DISEASE

Rare and uncooked meats may contain the larvae of *Trichina spiralis,* which produces trichinosis, a disease characterized by prolonged fever, swelling and stiffening of the muscles, and insomnia. These larvae are in the muscles of most of the hogs that are killed for market, and they are not detectable on inspection. They are killed by sufficient cooking.

Three different tapeworms are found in beef, pork and fish. Any of these may be carried into the human system in meat that is not cooked enough.

INDIAN STATE APPROVES CONTROL OVER BIRTHS

Four leading hospitals in the state of Mysore, India, will employ women doctors to give birth control information to married women, following the approval of the state. Contraceptive devices will be on sale in each of the hospitals at cost.

The policy was designed by Dr. Subha Rao, senior physician and principal of the Medical College at Bangalore, as one solution to the overcrowded condition of the country. The conservatism of the women of India is extreme, and there is some doubt as to their acceptance of the idea.

COW-TRAP IS DESTROYING AFRICAN TSETSE FLY

Entomologists of Africa are outwitting the dreaded tsetse fly, which carries germs of trypanosomiasis (sleeping sickness), by an imitation cow-trap. The tsetse fly feeds on the large game of Africa including the cow and buffalo.

The cow-trap is hollow with an open space underneath where the fly habitually lights. When the fly comes to this space, it sees light reflected through a transparent top of an artificially constructed cow. It goes toward the light and is trapped.

ST. LOUIS PLANS HOSPITAL FOR NEGRO PATIENTS

St. Mary's Infirmary at St. Louis University will be exclusively a Negro hospital as soon as the new Firmin Desloge hospital is completed. The hospital for Negroes will be conducted by the Sisters of St. Mary.

It will have in connection a school for Negro nurses with the same requirements as the University School of Nursing. The Negro medical association of St. Louis has endorsed the hospital.

Have you ever eaten Bran *this way?*

You don't know you're eating bran when you eat this delicious hot cereal, that gives you whole bran concealed in tender flavory flakes of whole wheat

THOUSANDS of bran eaters have found a new and appetizing way to eat bran.

Instead of ordinary dry bran, they eat Pettijohn's—a delicious flavory hot cereal that gives you ample amounts of bran—concealed in tender flakes of whole wheat.

Pettijohn's bran is so effective that doctors everywhere recommend it. So delicious, that those who don't like ordinary dry bran, revel in the zestful, nut-sweet flavor... the crunchy, meaty texture of these golden wheat flakes.

New Pettijohn's is made by the great Quaker Oats Company, manufacturers of 49 different cereal products, with mills in 12 cities throughout the United States and Canada. It is cooked, ready to eat, in 3 to 5 minutes. Try it tomorrow, at the suggestion of The Quaker Oats Company.

Pettijohn's

Are you interested in new menus for children? In new recipes for whole wheat cookies and desserts? Send for a new Free booklet, "The Truth About Bran." Address The Quaker Oats Company, Chicago.

The Quaker Oats Company 9-2
141 W. Jackson Blvd., Chicago
Please send me "The Truth About Bran."

Name .....

Address .....

City ..... *State* .....

DIET AND DECAY OF TEETH ARE CLOSELY RELATED

Diet and the decay of teeth bear a close relation to each other. If there is the wrong diet, containing insufficient quantities of phosphate of lime, the teeth will lose their hardness and begin to decay. Addition of green vegetables, milk, eggs and lime water to the diet hardens the teeth and prevents decay in growing children and adults.

Lime in the body may also be supplied by whole wheat flour, graham bread and lime water. A teaspoonful of lime water a day added to milk or water is an excellent preventive measure. Especially should the lime water be taken by invalids, prospective mothers, babies and persons who are taking medicines containing iron or acids.

Dental caries, or decay, is far more common among the more highly civilized races than among peoples living under less favorable or, at least, simpler conditions, says *The Journal* of the American Medical Association in a recent editorial. That is true because the uncivilized peoples have always had sufficient fruits and minerals in their diets.

Decay results from the formation of lactic acid and acetic acid in the mouth, which come from foods containing sugar and starch. These acids attack the soft and weak spots in the enamel of the teeth and open the door for the entrance of bacteria. In the opinion of some dentists, teeth decay mostly at night because there is less activity in the mouth at that time.

It is important to clean the teeth often—whenever there is food substance in the mouth. The tooth brush should be of medium stiffness, and should be used in a rotating manner on the front teeth and with upward and downward strokes on the back teeth. It is well to leave the selection of the dentifrice to the dentist since he knows the composition of the various kinds on the market and is able to judge the needs in the individual case. As a rule, gritty pastes scratch the enamel and are harmful.

The teeth of infants should be cleaned regularly. The tiny camel's hair brush is suitable for the purpose.

Tartar is a limelike material forming on the teeth nearest the outlets of the salivary ducts. It is a porous substance and soon promotes decay under its crusty surface by collecting many particles of food and bacteria. It should be removed regularly by the dentist, especially from the teeth of small children.

ORPHANS IN PALESTINE LACK MODERN CARE

Orphan education in Palestine is pictured in a recent number of the *Jewish Social Service Quarterly*. In the orphanage visited, more than 200 children were housed without a playroom or a playground. Doors and windows were barred as if the building were a jail.

The children wore black woolen garments and black hats. The class programs of the school were the same as they had been for the last two hundred years.

In the cheerless sleeping rooms there were no chairs, no clothes presses and no pictures. Over each bed, the only thing that a child could call his own, there was a slab with the name of the patron of that bed.

Few facilities were provided for bathing. Soap was distributed each morning and had to be returned to the supervisor immediately after it was used. On Fridays, the bathroom was heated and the 200 children took their bath within two hours.

In the hospital, two young men were found in disordered beds with their hats on. Little attention was being paid to their welfare.

PAY ATTENTION TO EYES OF RESTLESS CHILD

When a youngster is restless and looks out of the window instead of getting his lessons and is inclined to have headaches and digestive disturbances, he usually has eye trouble, says Dr. B. Franklin Royer, medical director of the National Society for Prevention of Blindness.

If a child is continually nervous at his studies, he may be suspected of having too great an eye handicap to concentrate on his work, and this cannot be overcome without the aid of scientific methods.

In addition to properly fitted glasses, there are other corrective measures to be taken. The child's posture should be watched; he should have intermittent periods of work for close and distant vision. The maintenance of general nutrition is important and a follow-up examination should always be made to determine to what extent the corrective program is being carried out by the child, says Dr. Royer.

CANADA USES PAPER BOTTLES

Paper containers are being used for the milk delivered to 100,000 consumers in Toronto, Winnipeg, Ottawa and Hamilton, Canada.

"YOUR HEALTH"

SAYS *this newest*
FRUIT COCKTAIL

SLICE a half to a whole banana (depending upon size) into a glass of orange juice. What newer, brighter note for starting the day? A refreshing treat for breakfast, it is no less acceptable for lunch, or as a dinner cocktail.

Luscious flavor and the color of sunshine are not all you will find in a Banana and Orange Juice Cocktail. There are vitamins, remember, and the mineral salts and other health essentials that have made both bananas and oranges regular kitchen staples.

Wherever introduced—in or out of the home, in hospitals, in home economics classes—Banana and Orange Juice Cocktail becomes quickly popular. Many use it as a fresh fruit dessert, by serving it in dessert dishes instead of glasses; and it is ever so delicious as a tangy, satisfying bite between meals.

Send for this new
BOOKLET

OTHER NEW BANANA USES

Our latest booklet of recipes and menus, "The New Banana," can make meal planning much, much easier. Send for free copy.

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Please send free your latest booklet of recipes and menu suggestions, "The New Banana."

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R

Wait a minute, mother!

Are you giving her all the extra "sunshine" that spoon will hold?

It's not cod-liver oil you are giving her, you know —not really. It's straight, strong bones, and sound even teeth, and rosy cheeks, and added protection from the winter ills you dread so much.

This is the magic that the vitamins work. So, of course, when you give her cod-liver oil for the vitamins it contains, you want cod-liver oil that is *rich* in vitamins.

Perhaps you don't realize that there is a world of difference in cod-liver oils. To make sure that every spoonful of Parke-Davis Standardized Cod-liver Oil contains *definitely measured* amounts of both Vitamin A and Vitamin D, we subject it to a series of carefully-controlled tests which take thirty-five days to complete.

As a result of these tests made in our own laboratories, we can say to you, "*Every teaspoonful* of Parke-Davis Standardized Cod-liver Oil contains as much of the disease-resisting Vitamin A as 11 pints of whole milk, or 9 eggs, or one pound of butter; and as much of the rickets-preventing "sunshine" Vitamin D as 7½ eggs or 2 pounds of butter."

This pure, golden oil comes in 4-ounce and 16-ounce bottles, or in convenient, easy-to-take capsules. At drug stores everywhere.

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STANDARDIZED

Cod-liver Oil

In 4-ounce and 16-ounce bottles — also in easy-to-take capsules

(Parke, Davis & Company supply a number of other cod-liver oil products also, including Cod-liver Oil with Viosterol.)